ESD-TR-88-283

MTR-10450



# Link Performance Data Management and Analysis System Users Manual

By

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December 1988

Prepared for

Deputy for Tactical Systems, JTIDS and AWACS
Electronic Systems Division
Air Force Systems Command
United States Air Force
Hanscom Air Force Base, Massachusetts






Project No. 4920

Prepared by

The MITRE Corporation
Bedford, Massachusetts

Contract No. F19628-86-C-0001

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**UNCLASSIFIED**
SECURITY CLASSIFICATION OF THIS PAGE

## REPORT DOCUMENTATION PAGE

Form Approved OMB No. 0704-0188

| | |
|---|---|
| 1a. REPORT SECURITY CLASSIFICATION<br>Unclassified | 1b. RESTRICTIVE MARKINGS |
| 2a. SECURITY CLASSIFICATION AUTHORITY | 3. DISTRIBUTION/AVAILABILITY OF REPORT<br>Approved for public release; distribution unlimited. |
| 2b. DECLASSIFICATION/DOWNGRADING SCHEDULE | |
| 4. PERFORMING ORGANIZATION REPORT NUMBER(S)<br>MTR-10450<br>ESD-TR-88-283 | 5. MONITORING ORGANIZATION REPORT NUMBER(S) |
| 6a. NAME OF PERFORMING ORGANIZATION<br>The MITRE Corporation<br>6b. OFFICE SYMBOL (If applicable) | 7a. NAME OF MONITORING ORGANIZATION |
| 6c. ADDRESS (City, State, and ZIP Code)<br>Burlington Road<br>Bedford, MA 01730 | 7b. ADDRESS (City, State, and ZIP Code) |
| 8a. NAME OF FUNDING/SPONSORING ORGANIZATION<br>Deputy for (continued)<br>8b. OFFICE SYMBOL (If applicable)<br>ESD/TCJ-3 | 9 PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER<br>F19628-86-C-0001 |
| 8c. ADDRESS (City, State, and ZIP Code)<br>Electronic Systems Division, AFSC<br>Hanscom AFB, MA 01731-5000 | 10. SOURCE OF FUNDING NUMBERS<br>PROGRAM ELEMENT NO. / PROJECT NO. 4920 / TASK NO / WORK UNIT ACCESSION NO |
| 11. TITLE (Include Security Classification)<br>Link Performance Data Management and Analysis System Users Manual | |
| 12. PERSONAL AUTHOR(S)<br>Elkin, Gabriel R. | |
| 13a. TYPE OF REPORT<br>Final<br>13b. TIME COVERED<br>FROM _____ TO _____ | 14. DATE OF REPORT (Year, Month, Day)<br>1988 December<br>15. PAGE COUNT<br>189 |
| 16 SUPPLEMENTARY NOTATION | |

| 17. COSATI CODES | | | 18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number) |
|---|---|---|---|
| FIELD | GROUP | SUB-GROUP | Data Reduction<br>User's Manual<br>Digital European Backbone<br>Field Data |
| | | | |
| | | | |

19. ABSTRACT (Continue on reverse if necessary and identify by block number)

The Digital European Backbone (DEB) Link Performance Data Management and Analysis System (LMAS) performs reduction and analysis of the data acquired by the DEB Data Collection System (DCS). The data collected by DCS, called Field Data, is stored on magnetic tapes (Field Tapes), and consists of Received Signal Level (RSL) and Deep Fade statistics. LMAS allows several months of Field Data from one side of a link to be merged onto a Summary Tape. Using the Summary Tape database, LMAS provides the capability to plot and report several statistics for a variety of time periods. This paper serves as a guide for users of LMAS software and as a reference on the structure of the database.

| | |
|---|---|
| 20 DISTRIBUTION/AVAILABILITY OF ABSTRACT<br>☐ UNCLASSIFIED/UNLIMITED ☒ SAME AS RPT ☐ DTIC USERS | 21 ABSTRACT SECURITY CLASSIFICATION<br>Unclassified |
| 22a NAME OF RESPONSIBLE INDIVIDUAL<br>J. Schultz | 22b TELEPHONE (Include Area Code)<br>(617) 271-2844<br>22c OFFICE SYMBOL<br>Mail Stop D135 |

DD Form 1473, JUN 86 *Previous editions are obsolete.*

SECURITY CLASSIFICATION OF THIS PAGE
**UNCLASSIFIED**

8a. Tactical Systems, JTIDS and AWACS

## ACKNOWLEDGMENTS

This document has been prepared by The MITRE Corporation under Project No. 4920, Contract No. F19628-86-C-0001. The contract is sponsored by the Electronic Systems Division, Air Force Systems Command, United States Air Force, Hanscom Air Force Base, Massachusetts 01731-5000.

The author wishes to thank the following people: Joe Sain, and especially Bill Amory, for their editorial contributions to this document; Judy Piantedosi for developing the plotting software; Lisi Crowther for completing various extensions to the software and this document; Rich Simone for his explanation of link engineering terminology; and Lisa Svenson and Joan Hughes for many hours of typing and proofreading.

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# SECTION 1

# INTRODUCTION

The Digital European Backbone (DEB) Link Performance Data Management and Analysis System (LMAS) performs reduction and analysis of the data acquired by the DEB Data Collection System (DCS). This data is merged to facilitate the studying of a link's performance over a long time period. Analysis of this data will indicate how well a link is performing. This document is intended to serve as a guide for users of LMAS software and as a reference on the structure of the database.

The data collected by DCS, called Field Data, is stored on magnetic tape (Field Tapes), and consists of Received Signal Level (RSL) and Deep Fade statistics. LMAS allows several months of Field Data from one side of a link to be merged onto a Summary Tape. Using the Summary Tape database, LMAS provides the capability to report and plot several statistics over a variety of time periods. LMAS consists of three subprograms -- a Field Data Quick-Look Package (FQLP), an Edit, Transfer, & Merge Package (ETMP), and a Statistics Graphic Analysis Package (SGAP).

The LMAS system was developed to reduce the data collected by the DCS. LMAS was being used as DCS was being modified; changes to DCS resulted in changes to LMAS, as well.

Section 2 presents the system hardware, the software hierarchy, the elements of the user interface, and the high-level functions provided by the system software.

Section 3 details procedures from turning on the system through starting one of the system's three subprograms, including the logon screens and prompts.

Sections 4, 5, and 6 present detailed screen-by-screen descriptions of FQLP, ETMP, and SGAP, respectively.

Appendices A, B, and C present a description and picture of each plot and of each page of each report of FQLP, ETMP, and SGAP, respectively. Appendix D contains the Summary Tape database format.

The reader of this document is assumed to have an understanding of Link Engineering terminology and measurements, be familiar with the DEB-DCS, and have a working knowledge of personal computers (PCs).

Throughout this document, bold letters will be used to represent a particular key that should be pressed. Function keys will be surrounded by angle brackets. For example, **<ENTER>** means that the "ENTER" key should be pressed. Square brackets will indicate a type of entry. For example, [date] means that a date should be entered.

# SECTION 2

# SYSTEM OVERVIEW

## INTRODUCTION

This section provides an overview of the hardware, software, database structure, and functions associated with the DEB LMAS.

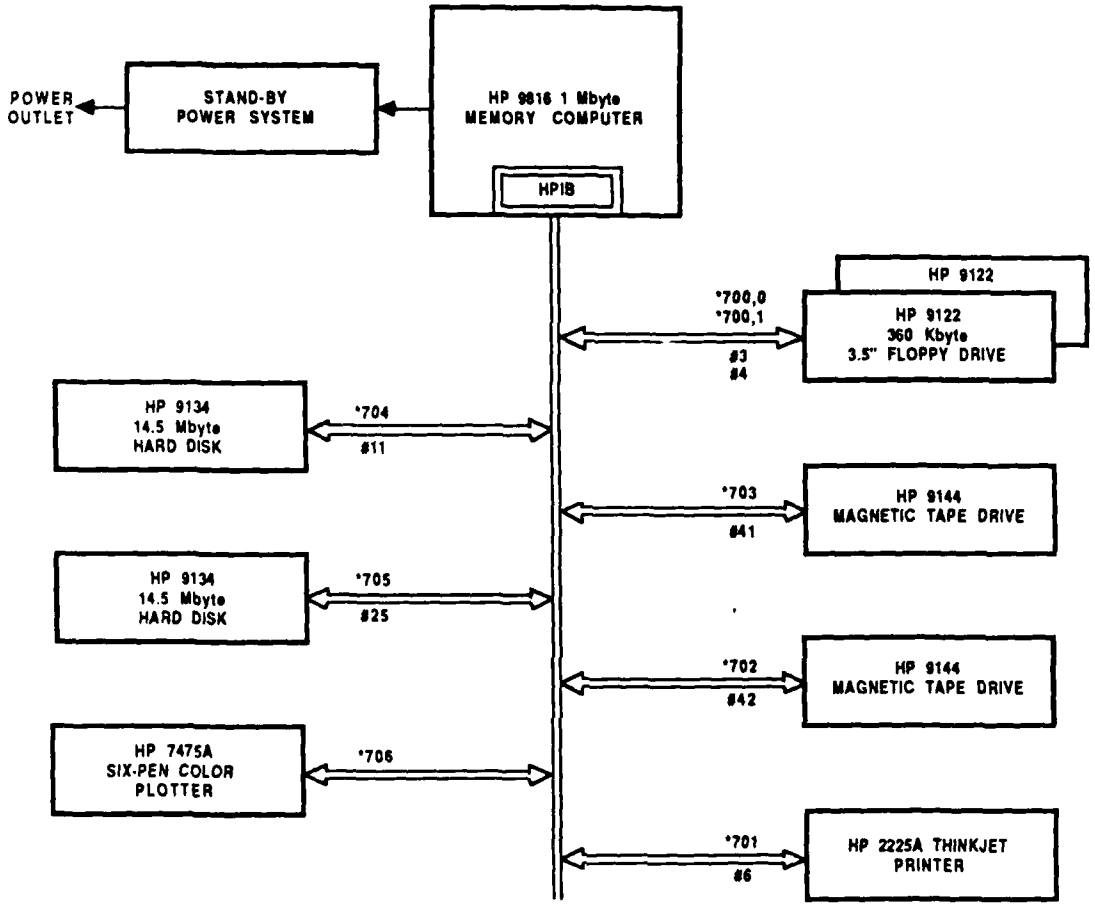
## HARDWARE

The LMAS hardware includes the following --

HP 9000 Series 200, Model 216 (HP 9816) computer
HP 98257A 1-Mbyte Random Access Memory (RAM) card
HP 98624A Hewlett-Packard Interface Bus (HP-IB) card
HP-IB cables, as needed
Two HP 9122 360-Kbyte 3.5 inch Flexible Disk Drives
Two HP 9134 14.5-Mbyte Hard Disk Drives
Two HP 9144A Magnetic Tape Drives
HP Magnetic Tapes, as needed
HP 7475A Six-Pen Color Plotter
HP 2225A ThinkJet Printer
Meirick, Inc. Stand-by Power System.

LMAS runs on the HP 9816 computer, with a 1-Mbyte RAM card and a HP-IB card added. Hewlett-Packard's implementation of the IEEE 488-1978 Standard Digital Interface for Programmable Instrumentation, the HP-IB, allows access to the system's various hardware devices. Each hardware device is connected to the bus via HP-IB cables, and is assigned a unique primary address on the bus. Figure 2-1 shows the LMAS hardware configuration. Notice that in addition to the HP-IB primary address, each device (except for the plotter) has a Pascal Workstation Unit Number, assigned by the computer operating system. LMAS software uses the unit number to access the hardware.

The HP 9122 consists of two 360-Kbyte 3.5 inch flexible disk drives, and is used to make backup copies of the system's software. The system requires two hard disk drives (HP 9134). The first hard disk contains the computer operating system and the LMAS software, and is used by the system to hold a copy of the Field Data to facilitate data management. The second




* HP-IB PRIMARY ADDRESS
# HP PASCAL WORKSTATION UNIT NUMBER

Figure 2-1. LMAS Hardware Diagram

hard disk is used during database merging. Two magnetic tape drives allow access to the database. Plots and reports are generated at the system's six-pen color plotter (HP 7475A) and printer (HP 2225A). In the case of a power outage, the Stand-by Power System keeps the computer running for a few minutes, so that current work can be saved or exited.

All hardware devices are plugged into AC power strips. The computer and hard disk drives are connected to the power strip which is plugged into the Stand-by Power System.

## SOFTWARE

### Hierarchy

The system software consists of three separately executed programs: FQLP, ETMP, and SGAP. Each program is divided into one or more modules performing a specific function.

FQLP produces a report that presents a high level picture of a Field Tape database.

ETMP provides facilities for database viewing, editing, and merging. Figure 2-2 shows the ETMP software hierarchy. The main program module calls separate modules for viewing Field Data, editing a Summary Header file, merging Field Data with Summary Data, excluding Field Data from a database merge, and initializing a Summary Tape. An arrow drawn into a database block indicates that the system is writing to the database. An arrow drawn from a database to a software module indicates that the system is reading the database.

SGAP generates hard copy plots and reports to be used for link performance analysis. Figure 2-3 shows the SGAP software hierarchy. The main module calls the plotting software module for plotter output or the reporting software module for printer output.

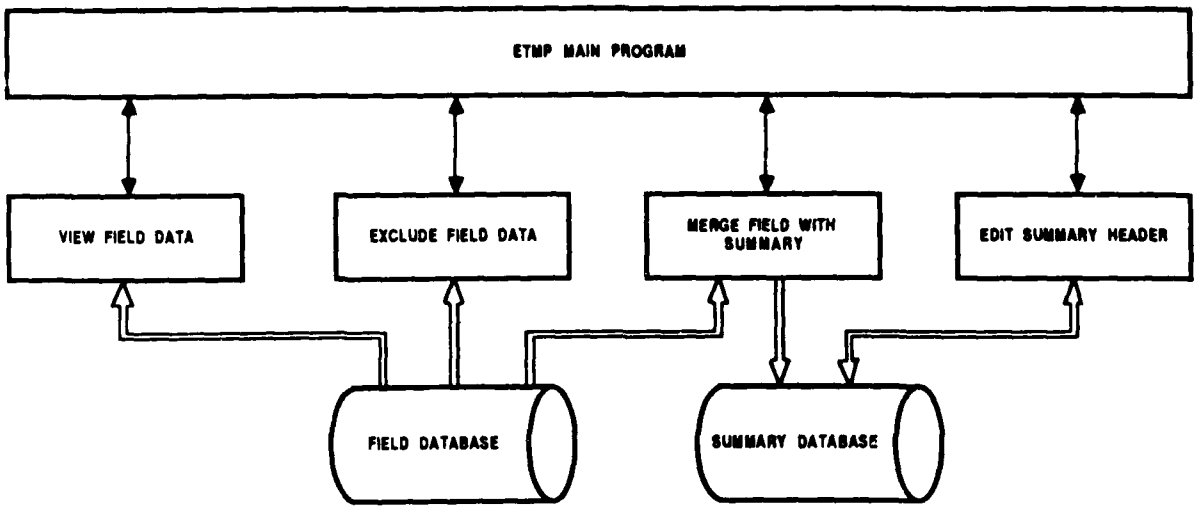



Figure 2-2. ETMP Software Hierarchy

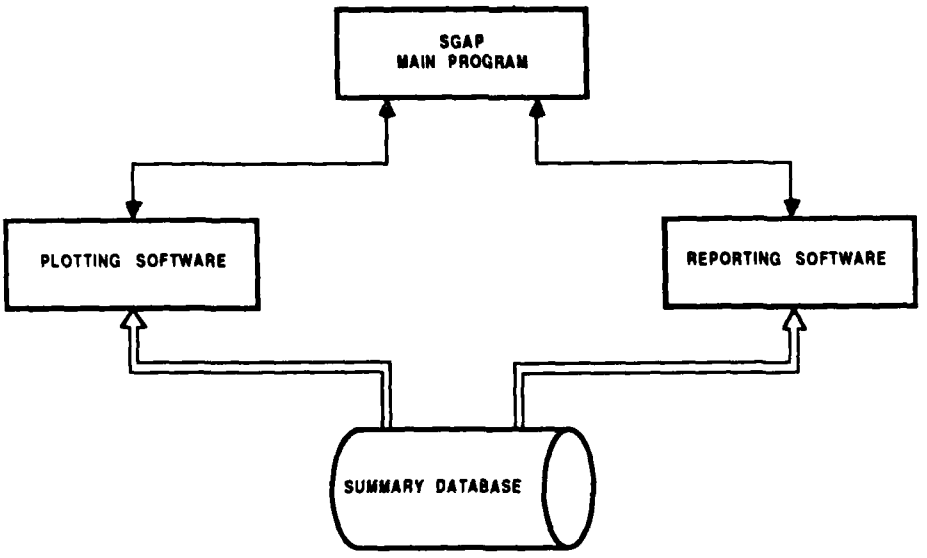



Figure 2-3. SGAP Software Hierarchy

## Procedure

Figure 2-4 presents the proper procedure for using the system software. After logging a Field Tape and making a backup copy, the user runs FQLP to get a high-level overview of the Field Data. The FQLP prints the overall Field Tape file structure and the header record on the tape, as well as the radio calibration tables.

The ETMP is then used to merge the Field Data with the corresponding Summary Database. The SGAP is used to analyze the Summary Database.

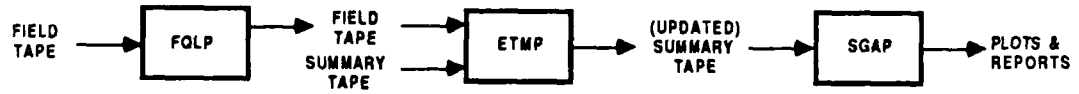



Figure 2-4. Procedure for Operating LMAS Software

# DATABASE STRUCTURE

## Terminology

In order to discuss the LMAS database, certain terms need to be defined. A "receive site" refers to one side of a DEB link, where a version of the DCS has been installed. As mentioned in section 1, LMAS has two types of database tapes. The first, a Field Tape, contains approximately one month of Field Data for a receive site. The second, a Summary Tape, contains several months of Field Data for a receive site, and is updated using the ETMP's merge facility. Thus, each receive site has its own database, called a Summary Tape Library.

## HP Pascal Workstation File System

When the operating system initializes a tape for use in the system, it places a File Information Block (FIB) at the front of the tape. One useful parameter contained by the FIB is a volume identification string, which is used by LMAS to differentiate between Field and Summary Tapes. In addition, the FIB contains a file directory table, which lists information such as the name, date, and time of creation of each file on the tape.

## Field Tape

A Field Tape, identified by the volume name "DEBFLD", is made up of four types of files: Field Header, Radio Calibration, RSL Data, and Deep Fade Data.

A Field Header file contains a one record description of the receive site at which the data was collected. This information includes the receive (local) site name, transmit (remote) site name, and the date and time header information was entered.

A Radio Calibration file contains a table that relates the analog-to-digital (A/D) values acquired in the field system to their corresponding RSL values. The DCS stores signal power level data as RSL, so the calibration tables are not needed for subsequent data reduction. Therefore, Radio Calibration files are not included in the Summary Data, and will not be mentioned again.

An RSL Data file contains one day of RSL statistics, divided into one record for each sampling period during the day. The record consists of a date and time the sampling period began, the total number of signals sampled for the period, a histogram of the signal power levels during the sampling period, and some statistics such as mean RSL and median RSL based on the histogram. A "histobottom" parameter, which indicates the first (weakest) signal level in the histogram, serves as a reference point for the histogram.

Using the DCS, a MITRE engineer working at the link site sets the deep fade threshold values at signal levels near the level of noise. The engineer records these thresholds in a notebook. The engineer then takes the data to MITRE, and using LMAS, enters the thresholds into a new header record on a Summary Tape Header file, which will be discussed in the next subsection. A Deep Fade Data file contains one day of statistics, with one record corresponding to each RSL Data file record. The deep fade data characterizes what happens when the signal level drops below the two threshold values.

## Summary Tape

The Summary Tape, a 67-Mbyte 600-foot magnetic tape with its volume labeled "DEBSUM", contains several months of data from a given site. A Summary Tape is made up of the following: an Index file, a Summary Header file, a Site Log file, a Calendar file, an RSL Statistics file, a Deep Fade Statistics file, five RSL Histogram files, and a Spare file. A general description of the data contained by each of these files appears in the following paragraphs. Figure 2-5 shows how a Field Tape database is mapped into a Summary Tape database. A detailed listing of the Summary Tape database parameters is presented in appendix D.

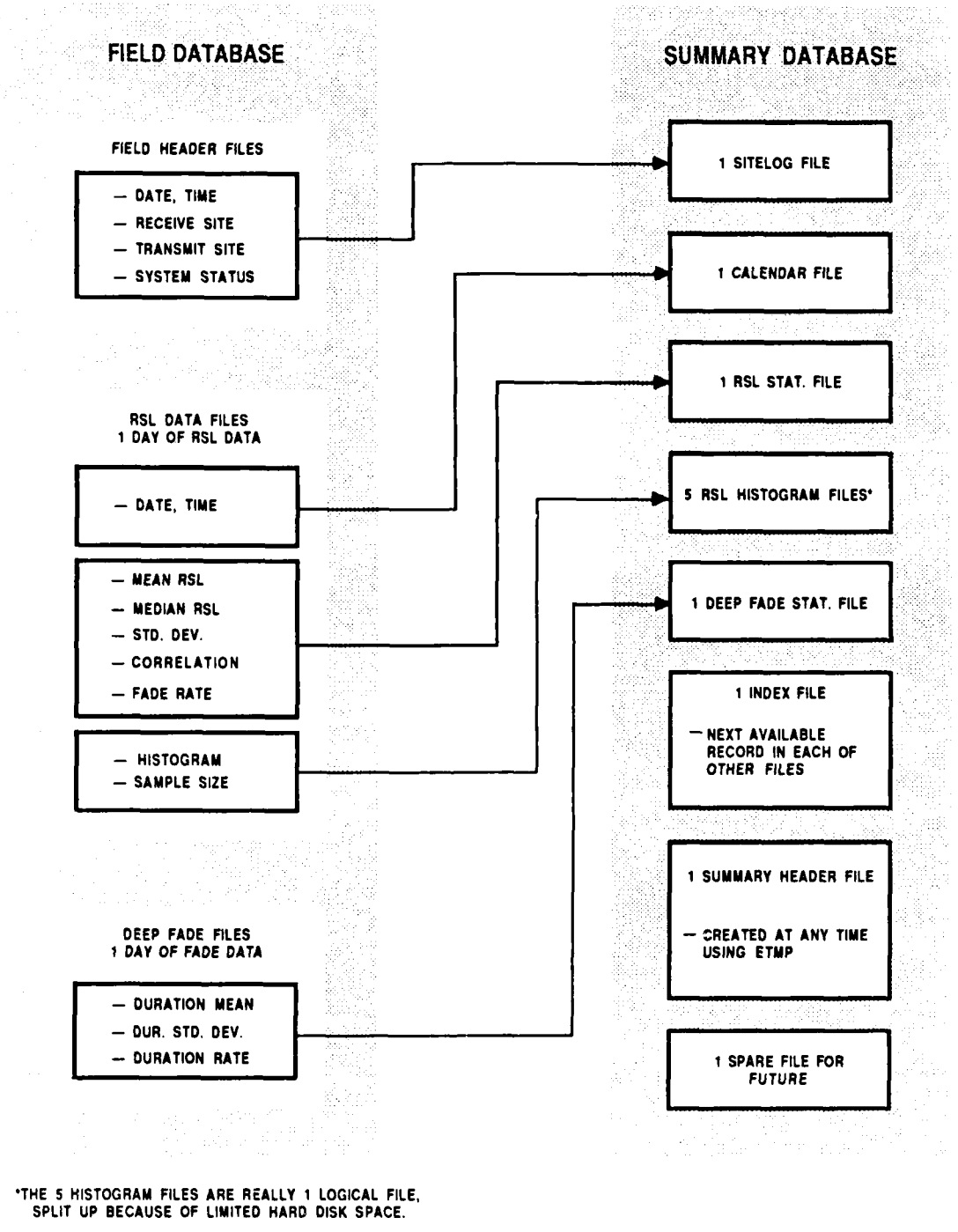



Figure 2-5. Mapping from Field Data to Summary Data

The Index file contains six two-byte integers, each a record counter for one or more of the other files on the tape. For the rest of this discussion, these indexes will be referred to as H, L, N, Q, S1, and S2. The H index, which indicates the next available Summary Header record, can be no larger than 4. The L index, which indicates the next available Site Log record, can be no larger than 201. The N index, which indicates the next available data collection record, can be no larger than 32,001, based on an average of four cycles per hour over approximately 11 months. If these values are exceeded, the system will prompt the user to replace the full summary tape with a blank tape.

The Q index, which is to be used for future additions to the Summary Tape, can be no larger than 8,001, based on one per hour over the 11 months used to limit N. S1 and S2 are unspecified indexes available for use with files which might be defined in the future.

The Summary Header file, indexed by H, contains parameters that are useful for computing the path loss of the link, as well as comments regarding the confidence one can have in those parameters. In addition, it contains test parameters such as signal power level thresholds used for computing Deep Fade statistics, descriptions of the equipment being used at the link, and space for approximately 200 words of text to cover anything not included in the rest of the Header record. The Summary Tape Headers are created at MITRE-Bedford from notes written by a MITRE engineer during a visit to the field site.

The Site Log file, indexed by L, contains the number of received channels and transmitters being used, a status comment taken from the Field Header, and the date and time associated with each comment.

The Calendar file, indexed by N, contains the date and time of each RSL data collection, or sample, period. The two Statistics files, also indexed by N, contain RSL and Deep Fade statistics for each data collection period. The five Histogram files, also indexed by N, contain the histograms for each RSL data collection period.

The Spare file, indexed by Q, consists of space for future data not necessarily related to the data currently being collected.

Extendability

As with many systems, LMAS has evolved during design and development into a much more powerful tool than had originally been proposed. It is expected that analysis of the current database and acquisition of new hardware will necessitate changes to the database. LMAS, a magnetic tape based system, does not have the flexibility of a commercial database management system.

By making appropriate changes, however, one can introduce data to the system. First, data collection software must be written to produce data files conforming to the LMAS Field Data format. Second, software must be written to perform the ETMP merge function on the new Field Data files, creating a file that conforms to the Summary Data format.

Currently, the Summary Tape files occupy approximately 63.7 Mbytes, as shown in table 2-1. There is not much more room on the Summary Tape for new data files, so a second Summary Tape may be needed in the future. The Spare file, mentioned earlier, is provided as an example of an extension to the Summary database.

Table 2-1. Summary Tape Allocation

| File Name | Record/File | Record Size (Bytes) | File Size (Bytes) |
|---|---|---|---|
| INDEX | 1 | 12 | 12 |
| HEADER | 3 | 2,866 | 8,598 |
| SITELOG | 200 | 14 | 2,800 |
| CALENDAR | 32,000 | 8 | 256,000 |
| STAT1 | 32,000 | 176 | 5,632,000 |
| STAT2 | 32,000 | 128 | 4,096,000 |
| HISTO1 | 6,400 | 1,646 | 10,534,400 |
| HISTO2 | 6,400 | 1,646 | 10,534,400 |
| HISTO3 | 6,400 | 1,646 | 10,534,400 |
| HISTO4 | 6,400 | 1,646 | 10,534,400 |
| HISTO5 | 6,400 | 1,646 | 10,534,400 |
| SPARE | 8,000 | 128 | 1,024,000 |
| | | Configured | 63,691,410 |
| | | Unconfigured | 2,308,590 |
| | | Safety Margin | 1,000,000 |
| | | Total | 67,000,000 |

## USER INTERFACE

LMAS is menu-driven; a menu allows you to choose from a series of options. A screen presents information, and also provides a set of commands or function keys for manipulating the information. The last option of a menu or screen is always the "EXIT", which returns control to the menu or screen at the next level above the current one.

The ETMP subprogram uses a feature called "command completion" in its menus, which means that if you enter a valid menu command, ETMP displays the full name of the chosen option and pauses momentarily to allow you to view the choice. If you chose the wrong option, you can return to the menu by selecting the "EXIT" option in the menu or screen at the next lower level. Throughout the system, the error messages are displayed on the bottom line of the menu or screen.

## FUNCTIONS

This subsection is divided into three paragraphs, each of which describes the major functions of one of the three LMAS packages.

### FQLP Package

This package produces a report that examines a Field Tape database at a high level. It summarizes the files contained by the Field Tape, prints each unique Field Header file, and identifies Field Header files that are copies of others. It prints each Radio Calibration table, uses a set of criteria to determine whether the table is valid, and indicates which channel(s) were recalibrated and which were not. It prints a one page summary of all the Field Header files, a one page summary of all the Radio Calibration tables, and a one page summary of all the RSL Data Collection files.

### ETMP Package

This package allows the operator to merge a Field Tape database with an existing Summary Tape database for the same receive site on the same link. It also provides a facility for on-screen and hard copy Field Data Viewing, a Summary Header Editor for recording a variety of information about the field system at which data has been collected, and the capability to exclude time intervals of Field Data from the database merge.

### SGAP Package

This package generates a variety of plots and reports that can be used to analyze the performance of a link. It allows the operator to choose from several statistical parameters, time scales, and data point resolution

units. SGAP produces plots for the following statistical parameters: median RSL; mean RSL; difference between median and mean, or delta; fade rate; received channel correlation coefficients; and cumulative probability for an RSL histogram. SGAP prints reports for the following statistical parameters: mean RSL with standard deviation; received channel correlation coefficients; RSL probabilities; and deep fade statistics, including mean duration, standard deviation, and rate of signal level below two thresholds set in the field system. SGAP currently reduces data for a day, a month, a season, and a year.

# SECTION 3

# SYSTEM LOGON

## INTRODUCTION

The SYSTEM LOGON section describes all procedures from turning on the system through access to the main applications menu of each of the three packages that comprise the system -- FQLP, ETMP, and SGAP. After reading this section, you should read the screen-by-screen description of the applicable subprogram.

The LOGON SCREEN INDEX subsection contains a table giving an alphabetical listing of the first lines of SYSTEM LOGON screens, and the page number where the description of the screen can be found. The SCREEN RELATIONSHIPS subsection contains a flow chart displaying the relationships between SYSTEM LOGON screens. For each screen, the SYSTEM LOGON PROCEDURE subsection contains a text description, a picture, and a guide to interacting with the screen.

## LOGON SCREEN INDEX

Table 3-1 contains a listing of the first lines of the SYSTEM LOGON screens and their respective page numbers.

Table 3-1. SYSTEM LOGON Screen Index

SCREEN RELATIONSHIPS

Figure 3-1 shows the SYSTEM LOGON screen flow. Each rectangular box represents a screen.

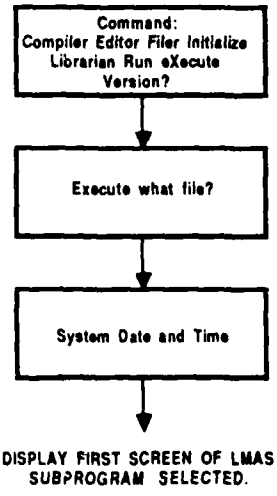



Figure 3-1. SYSTEM LOGON Screen Flow

SYSTEM LOGON PROCEDURE

1) Verify that the system hardware is connected properly, and make sure each hardware device is powered "ON".

2) Set the AC power strip switches to the "ON" position.

3) The computer operating system will be loaded automatically into memory. When the system is ready, it displays the following prompt:

```
+-------------------------Sample Screen-------------------------------------+
|                                                                           |
|  Command:  Compiler Editor Filer Initialize Librarian Run eXecute Version?|
|                                                                           |
+---------------------------------------------------------------------------+
```

Interaction

Command: Compiler Editor Filer Initialize Librarian Run eXecute Version ?

| User Entry | System Response |
|---|---|
| **X** | Prompts you for the name of the file you wish to execute. |
| (C,E,F,I,L,R,V) | See HP Pascal 3.0 Workstation System, 1984, by the Hewlett-Packard Company. |

4) The system prompts you for the name of the file you wish to execute:

Sample Screen

```
Execute what file?
```

Interaction

Execute what file?

| User Entry | System Response |
|---|---|
| **QUICK** <**ENTER**> | Runs the FQLP program. |
| **MERGE** <**ENTER**> | Runs the ETMP program. |
| **STATS** <**ENTER**> | Runs the SGAP program. |

5) The system asks you to enter the date and time.

The system displays the current date, along with instructions for correcting the date:

Sample Screen

```
System Date and Time


Date: 01 MAR 1900
If the Date is correct, press "ENTER" key
otherwise, Type Date (dd mmm yyyy): 21 MAY 1987

Time: 00:50:00
If the time is correct, press "ENTER" key
otherwise, type time (hh:mm:ss): 10:38:30
```

Interaction

If the Date is correct, press "ENTER" key.
Otherwise, type Date (dd mmm yyyy)

NOTE: Be sure to include spaces between the day, month, and year.

| User Entry | System Response |
|---|---|
| **<ENTER>** | Accepts the current date the system has displayed. |
| [date] **<ENTER>** | If a new date is entered correctly, it becomes the system date. If an invalid date is entered, the system repeats the prompt. |

Interaction

If the Time is correct, press "ENTER" key.
Otherwise, type Time (hh:mm:ss)

NOTE: Be sure to include colons between the hours, minutes, and seconds.

| User Entry | System Response |
|---|---|
| **<ENTER>** | Accepts the current time the system has displayed, and begins to run the LMAS subprogram that has been selected. |
| [time] **<ENTER>** | If a new time is entered correctly, it becomes the system time. If an invalid time is entered, the system repeats the prompt. When the time has been entered correctly, the system runs the LMAS subprogram that has been selected. |

# SECTION 4

# FQLP SCREEN DESCRIPTIONS

## INTRODUCTION

This section presents a detailed screen-by-screen description of the FQLP. The FQLP presents a picture of the file structure of the field tape, including some analysis of those files. The FQLP acts as a "filter" that can inform the user when it encounters bad data on the tape. This helps to prevent a merging of bad data with other data already on the Summary Tape.

The FQLP SCREEN INDEX subsection contains a listing of the first lines of FQLP screens, and the page number where the description of the screen can be found. The SCREEN RELATIONSHIPS subsection contains a flow chart displaying the relationships between FQLP screens. Finally, for each screen, this section contains a text description, a picture, and a guide to interacting with the screen.

## FQLP SCREEN INDEX

Table 4-1 contains a listing of the first lines of the FQLP screens and their respective page numbers.

Table 4-1. FQLP Screen Index

SCREEN RELATIONSHIPS

Figure 4-1 shows the FQLP screen flow. Each rectangular box represents a screen.

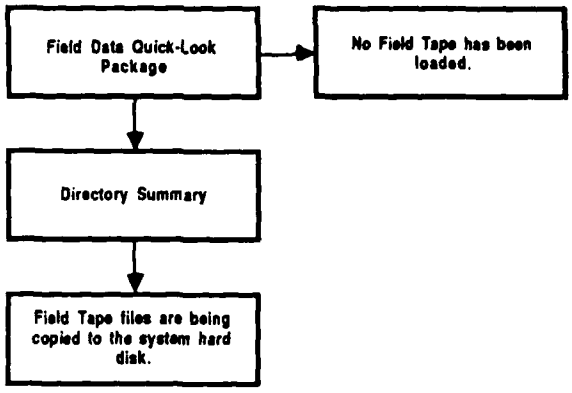



Figure 4-1. FQLP Screen Flow

FQLP

## Description

The opening screen for FQLP prompts the user to load a Field Tape. FQLP will generate a quick-look report for the Field Data.

NOTE: Wait until the "Busy" light on the tape drive goes out, signifying that the tape has been loaded completely.

Sample Screen

```
Field Data Quick-Look Package -- (FQLP)

Load Field Tape as follows:

   (1) Verify that the write-protect switch is in the
       "SAFE" position.

   (2) Load Field Tape in one of the system tape drives.

After tape has been completely loaded, Press "ENTER" key to continue.
```

## Interaction

After the tape has been completely loaded, press the "ENTER" key to continue.

| User Entry | System Response |
|---|---|
| **<ENTER>** | System checks its magnetic tape drives for a Field Tape. |

NO FIELD TAPE HAS BEEN LOADED

Description

This screen informs the user that the system was unable to find a Field Tape in its tape drives.

Sample Screen

```
NO Field Tape has been loaded.

Do you wish to try again (Y,N) ?
```

Interaction

Do you wish to try again (Y,N) ?

| User Entry | System Response |
|---|---|
| **Y <ENTER>** | Repeats Load A Field Tape screen. |
| **N <ENTER>** | Quits FQLP and returns to the computer operating system (see section 3, SYSTEM LOGON). |

DIRECTORY SUMMARY

Description

The Directory Summary displays the number of files of each type, such as Field Header, Radio Calibration, RSL Data Collection, and Deep Fade.

Sample Screen

```
Directory Summary



 1 Header file(s)
 1 Calibration file(s)
30 Data Collection file(s)

Do you wish to continue (Y,N) ?
```

Interaction

Do you wish to continue (Y,N) ?

| User Entry | System Response |
|---|---|
| **Y <ENTER>** | Copies Field Tape files to the system hard disk, and then begins the quick-look report. |
| **N <ENTER>** | Quits FQLP, and returns to the computer operating system (see section 3, SYSTEM LOGON). |

FIELD TAPE FILES ARE BEING COPIED TO THE SYSTEM HARD DISK

Description

This screen informs the user that the Field Tape files are being copied to the system hard disk so that they may be accessed quickly during the quick-look process.

Sample Screen

```
Field Tape files are being copied to the system hard disk.

#41:1HDFILE--->  #11:1HDFILE
#41:1RFCAL--->  #11:1RFCAL
#41:1DATA--->  #11:1DATA
#41:2DATA--->  #11:2DATA
#41:3DATA--->  #11:3DATA
#41:4DATA--->  #11:4DATA
#41:5DATA--->  #11:5DATA
#41:6DATA--->  #11:6DATA
```

Interaction

No user interaction is required. When the system finishes copying the files to the hard disk, the quick-look report is printed.

# SECTION 5

# ETMP SCREEN DESCRIPTIONS

## INTRODUCTION

This section presents a detailed screen-by-screen description of the ETMP. The ETMP SCREEN INDEX subsection contains a listing of the first lines of ETMP screens and the page number where the description of the screen can be found. The SCREEN RELATIONSHIPS subsection contains flow charts displaying the relationships between ETMP screens. For each screen, this section also contains a text description, a picture, and a guide to interacting with the screen.

## ETMP SCREEN INDEX

Table 5-1 contains a listing of the first lines of the ETMP screens and their respective page numbers.

Table 5-1. ETMP Screen Index

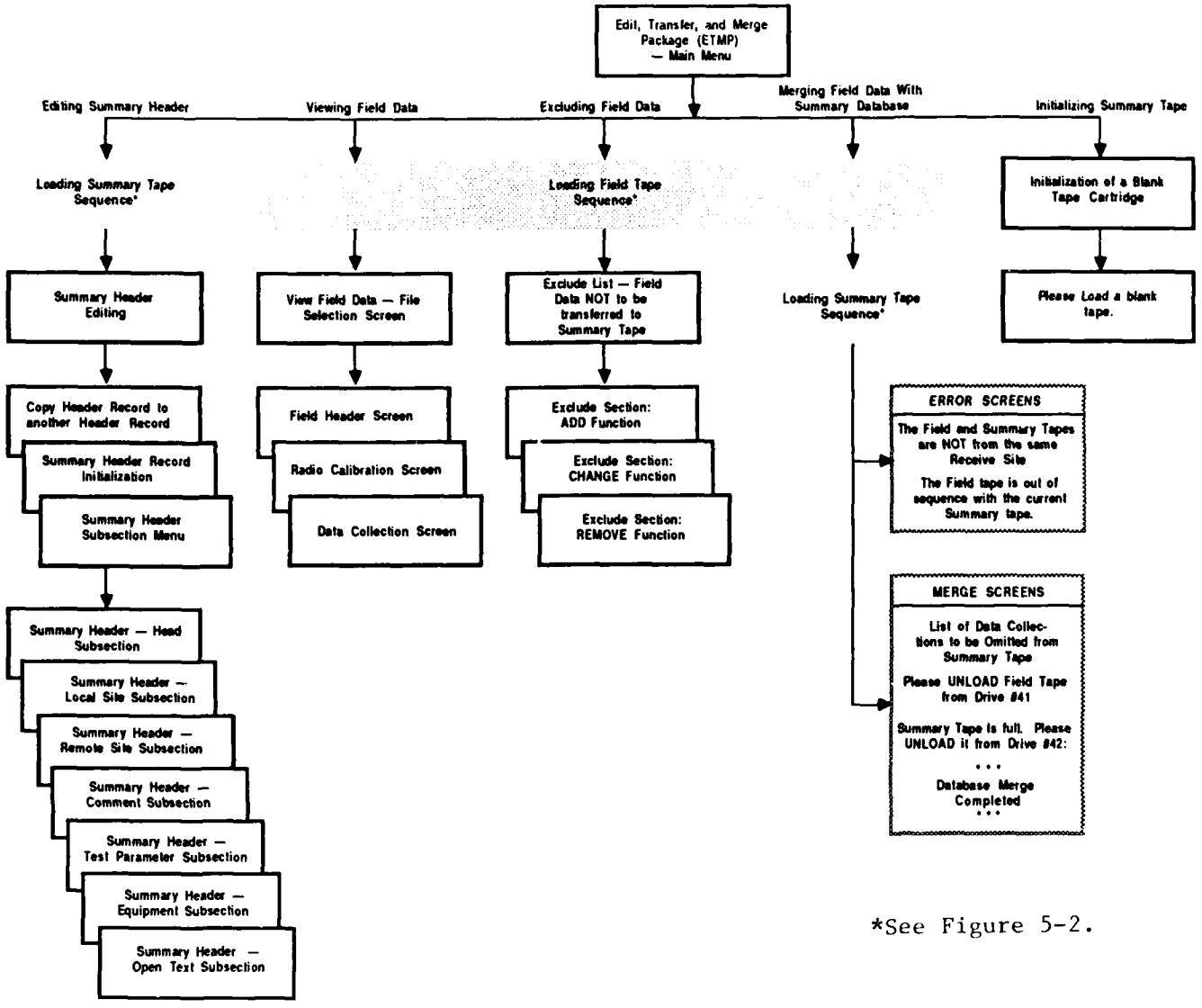
Table 5-1. (Continued)

Table 5-1. (Concluded)

| (First Line of Screen | Page) |
|---|---|
| Summary Header Record Initialization. | 76 |
| Summary Header -- Remote Site (Xmtr) Subsection | 59 |
| Summary Header Subsection Menu | 51 |
| Summary Header -- Test Parameter Subsection | 65 |
| Summary Tape is full. Please UNLOAD it from Drive #42: | 87 |
| The Field Tape is out of sequence with the current Summary Tape. | 86 |
| View Field Data -- File Selection Screen | 42 |
| Would you like to use the Field Data already copied to the hard disk (Y,N)? | 34 |
| Would you like to use the Summary Tape already copied to the hard disk (Y,N)? | 40 |

## SCREEN RELATIONSHIPS

Figures 5-1 and 5-2 show the flow of control between ETMP screens. Figure 5-1 presents the screen flow for the five major functions of ETMP: editing the Summary Header file; viewing Field Data; excluding Field Data; merging the database; and initializing a Summary Tape. Figure 5-2 presents the screen sequences for loading Field Data and Summary Data into the system. Each rectangular box represents a screen.




*See Figure 5-2.

Figure 5-1. ETMP Screen Flow

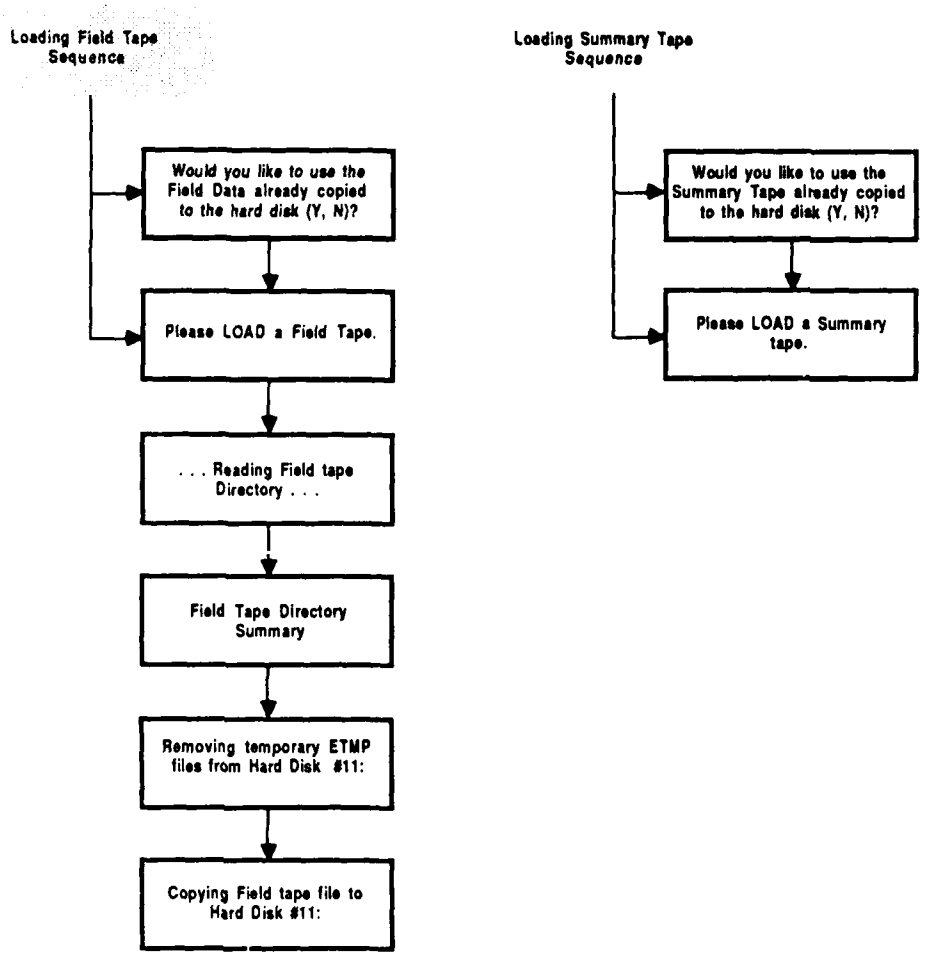



Figure 5-2. ETMP Loading Data Screen Flow

EDIT, TRANSFER, & MERGE PACKAGE -- MAIN MENU

## Description

The ETMP Main Menu is the opening display for ETMP. This menu allows you to choose between Viewing Field Data, Editing the Summary Header file, Excluding Field Data from the database merge, Merging Field Data with Summary Data, and Initializing a Summary Tape.

Sample Screen

```
Edit, Transfer, & Merge Package (ETMP) -- Main Menu

Version 1.0          June, 1987

        V =  VIEW Field Data

        H =  Edit Summary HEADER

        E =  EXCLUDE Field Data from Merge

        M =  MERGE Field Data with Summary Database

        I =  INITIALIZE Summary Tape


        X =  EXIT Program


Enter Selection:
```

## Notes

When you start with an empty Summary Database, you must do the following before you try to merge Field Data:

1. Initialize the Summary Tape. See INITIALIZATION OF A BLANK TAPE CARTRIDGE (page 89).

2. Use the Header editor to enter a DEB link number, and receive and transmit site names. See SUMMARY HEADER EDITING (page 49).

Interaction

Enter Selection:

| User Entry | System Response |
|---|---|
| **V** | Displays screens for loading Field Data into the system, prior to viewing the data. |
| **H** | Displays screens for loading Summary Data into the system, prior to editing header data. |
| **E** | Displays screens for loading Field Data into the system, prior to excluding the data from a database merge. |
| **M** | Displays screens for loading Field Data into the system, then displays screens for loading Summary Data into the system, prior to merging the data. |
| **I** | Enters Initializing Summary Tape section of ETMP. |
| **X** | Exits to the operating system. |

WOULD YOU LIKE TO USE THE FIELD DATA ALREADY COPIED TO THE HARD DISK (Y,N)?

Description

This screen appears when the user has selected either the VIEW FIELD DATA function, the EXCLUDE FIELD DATA function, or the MERGE FIELD DATA function from the ETMP Main Menu and there is Field Data on the system hard disk. When Field Data has already been copied to the system hard disk drive, this function allows the user to reuse that field data. This function is omitted if there is no Field Data copied onto the system hard disk drive. In this case, the first prompt is described in PLEASE LOAD A FIELD TAPE (page 35).

Sample Screen

```
Would you like to use the Field data already copied to the hard disk (Y,N)?
```

Interaction

Would you like to use the Field Data already copied to the hard disk (Y,N)?

| User Entry | System Response |
|---|---|
| **Y <ENTER>** | System uses Field Data currently copied to disk. |
| **N <ENTER>** | Current Field Data is erased from the hard disk. The system then goes to PLEASE LOAD A FIELD TAPE (page 35). |

Notes

If the user entry is **Y**, the system goes to the menu or screen that has been selected by the user from the ETMP Main Menu. If the user entry is **N**, the system goes to PLEASE LOAD A FIELD TAPE (page 35).

PLEASE LOAD A FIELD TAPE

Description

This screen appears if no Field Data currently resides in the system or if the user answered N to the previous screen, "Would you like to use the Field data already copied to the hard disk (Y,N)?". This allows you to load a Field Tape into the system.

Sample Screen

```
Please LOAD a Field tape.

Press "ENTER" key after the tape has been loaded
   or "X" to return to the Main Menu
```

Interaction

Press "ENTER" key after the tape has been loaded, or "X" to return to the ETMP Main Menu.

| User Entry | System Response |
|---|---|
| **<ENTER>** | Searches magnetic tape drives for a Field Tape. If it does not find one, the prompt is repeated. |
| **X** | Returns to EDIT, TRANSFER, & MERGE PACKAGE (ETMP) -- MAIN MENU (page 33). |

Notes

Wait until the "BUSY" light on the tape drive goes out, signifying that the tape has been loaded completely. This process takes approximately two to three minutes. If a Field Tape is found, the message "... Reading Field tape Directory ..." is displayed.

... READING FIELD TAPE DIRECTORY ...

Description

This screen allows you to get a hard copy of a Field Tape file directory.

Sample Screen

```
... Reading Field tape Directory ...

Do you want a hardcopy of the Field tape directory ? (Y or N):
```

Interaction

Do you want a hard copy of the Field Tape directory ? (Y or N):

| User Entry | System Response |
|---|---|
| **Y <ENTER>** | Prints hard copy listing of the Field Tape file directory. |
| **N <ENTER>** | Does not print hard copy listing. |

In both cases, the system ends at FIELD TAPE DIRECTORY SUMMARY (page 37).

FIELD TAPE DIRECTORY SUMMARY

Description

Field Tape Directory Summary provides a high-level picture on the screen of the type and number of files on the Field Tape.

Sample Screen

```
Field Tape Directory Summary


  1 Field Header file(s)
  1 RF Calibration Table file(s)
 30 RSL Data Collection Statistics file(s)
 30 Deep Fade Statistics file(s)


Press "ENTER" to Continue, or "X" to Exit to Main Menu.
```

Interaction

Press "ENTER" to Continue, or "X" to return to the ETMP Main Menu.

| User Entry | System Response |
|---|---|
| **<ENTER>** | System copies Field Tape files to the hard disk. The system then goes to REMOVING TEMPORARY ETMP FILES FROM HARD DISK #11 (page 38). |
| **X** | Returns to EDIT, TRANSFER, & MERGE PACKAGE (ETMP) -- MAIN MENU (page 33). |

## REMOVING TEMPORARY ETMP FILES FROM HARD DISK #11

### Description

The system removes Field Tape files previously copied to the hard disk, and then copies new Field Tape files.

Sample Screen

```
Removing temporary ETMP files from Hard Disk #11:

This process will take 1 minute.

Keyboard Disabled for this routine !!!
```

### Interaction

Enter 1 for first 15 files, 2 for last 15 files:

| User Entry | System Response |
|---|---|
| 1 <ENTER> | The first 15 files are copied to the hard disk. |
| 2 <ENTER> | The last 15 files are copied to the hard disk. |

### Notes

When the system has finished removing existing Field Tape files (a process of approximately one minute), it prompts for the new files as shown above. If a Field Tape is ready for processing, the screen is cleared, and the system goes to COPYING FIELD TAPE FILES TO HARD DISK #11 (page 39). If a tape is not ready for processing, the prompt is repeated; unless a tape is readied, the only way out of this part of the cycle is to reset the system and start over.

COPYING FIELD TAPE FILES TO HARD DISK #11

## Description

The system copies Field Tape files to the hard disk. This decreases input/output access times throughout the rest of the program.

Sample Screen

```
Copying Field tape files to Hard Disk #11:

This process will take   40 minutes.
Starting Time: 06 May 1987          08:48:25



... Copying #41:1HDFILE   ---> #11:1HDFILE ...
... Copying #41:1RFCAL    ---> #11:1RFCAL ...
... Copying #41:1DATA     ---> #11:1DATA ...
... Copying #41:2DATA     ---> #11:2DATA ...
... Copying #41:2HDFILE   ---> #11:2HDFILE ...
... Copying #41:2RFCAL    ---> #11:2RFCAL ...
... Copying #41:3DATA     ---> #11:3DATA ...
... Copying #41:3STAT2    ---> #11:3STAT2 ...
... Copying #41:4DATA     ---> #11:4DATA ...
... Copying #41:4STAT2    ---> #11:4STAT2 ...









Keyboard Disabled for this routine !!!
```

## Interaction

No user interaction is required. When the system finishes copying the files to the hard disk, the opening screen of the ETMP Main Menu function selected by the user at the Main Menu is displayed.

## Notes

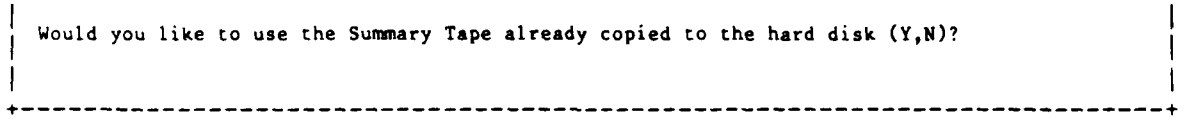
The system displays an estimate of how long it will take to copy the files to the hard disk. For a full month of data, expect the copying to take approximately one hour.

WOULD YOU LIKE TO USE THE SUMMARY TAPE ALREADY COPIED TO THE HARD DISK (Y,N)?

## Description

This function appears if the user has selected either the "Edit Summary Header" function or the "Merge Field Data with Summary Data" function from the ETMP Main Menu and there is summary data on the hard disk. It allows you to continue to use Summary Data already copied to the system hard disk.

Sample Screen




## Interaction

Would you like to use the Summary Tape already copied to the hard disk (Y,N)?

| User Entry | System Response |
|---|---|
| **Y <ENTER>** | System uses Summary Data currently copied to disk. |
| **N <ENTER>** | System discards current Summary Data. The system then goes to PLEASE LOAD A SUMMARY TAPE (page 41). |

PLEASE LOAD A SUMMARY TAPE

## Description

This screen appears if no Summary Data currently resides in the system or if the user answered N to the previous screen's "Would you like to use the Summary Tape already copied to the hard disk (Y,N)?". This allows you to load a Summary Tape into the system.

Sample Screen

```
Please LOAD a Summary tape.

Press "ENTER" key after the tape has been loaded
   or "X" to return to the Main Menu
```

## Interaction

Press "ENTER" key after the tape has been loaded, or "X" to return to the ETMP Main Menu.

| User Entry | System Response |
|---|---|
| <ENTER> | Searches magnetic tape drives for a Summary Tape. If it does not find one, it displays an error message and repeats the prompt. |
| X | Returns to EDIT, TRANSFER, & MERGE PACKAGE (ETMP) -- MAIN MENU (page 33). |

## Notes

Press <ENTER> when the "BUSY" light goes out, signifying that the tape has been loaded. If data is to be merged with the Summary Database, set the write-protect switch on the tape cartridge to the "SAFE" position. If the intent is only to edit the Summary Header file, make sure the switch is not in the "SAFE" position.

VIEW FIELD DATA -- FILE SELECTION SCREEN

Description

This screen is selected from the ETMP Main Menu and is preceded by the appropriate field data loading sequence. The File Selection Screen displays one page (12 files) of the Field Tape File Directory.

Sample Screen

View Field Data -- File Selection Screen

| File Number | File type | Date | Time |
|---|---|---|---|
| 1 | FHEADER ( 1) | 9 JUL 1986 | 00:00:00 |
| 2 | RFCAL ( 1) | 25 JUL 1986 | 11:50:05 |
| 3 & 4 | RSL & DFADE ( 1) | 19 MAR 1987 | 00:00:00 |
| 5 & 6 | RSL & DFADE ( 2) | 20 MAR 1987 | 11:59:03 |
| 7 & 8 | RSL & DFADE ( 3) | 21 MAR 1987 | 00:00:00 |
| 9 & 10 | RSL & DFADE ( 4) | 22 MAR 1987 | 00:00:00 |
| 11 & 12 | RSL & DFADE ( 5) | 23 MAR 1987 | 00:00:00 |
| 13 & 14 | RSL & DFADE ( 6) | 24 MAR 1987 | 00:00:00 |
| 15 & 16 | RSL & DFADE ( 7) | 25 MAR 1987 | 00:00:00 |
| 17 & 18 | RSL & DFADE ( 8) | 26 MAR 1987 | 00:00:00 |
| 19 & 20 | RSL & DFADE ( 9) | 27 MAR 1987 | 00:00:00 |
| 21 & 22 | RSL & DFADE (10) | 28 MAR 1987 | 00:00:00 |

Commands:

Up, Down Arrows = Select File
S = Screen view of file
P = Printer view of file
X = eXit to Main Menu
F = Forward page of files

Interaction

Commands:

| User Entry | System Response |
|---|---|
| [Arrows] | Moves cursor among the files on the current page of the File Directory. Cursor position indicates the selected file. |
| **S** | Displays data from the selected file on the screen. See FIELD HEADER SCREEN (page 44), RADIO CALIBRATION SCREEN (page 45), or DATA COLLECTION SCREEN (page 47). |
| **P** | Prints a hard copy of data from the selected file. |
| **F** | Displays the next page of the File Directory. |
| **B** | Displays the previous page of the File Directory. |
| **X** | Returns to EDIT, TRANSFER, & MERGE PACKAGE (ETMP) -- MAIN MENU (page 33). |

Notes

The file number in the File Selection Screen (see sample screen) represents the order in the Field Tape File Directory. The file types currently handled by ETMP are Field Header (FHEADER), Radio Calibration (RFCAL), RSL Statistics (RSLDATA), and Deep Fade Statistics (DFADE). The number in parentheses following the file type is the number of occurrences for that particular type of file. RSL and Deep Fade data files for any given day are displayed on the same screen line.

The system's storage is limited, so 15 files are the most that can be loaded (unloaded files are indicated by a date of '1 MAR 1900'). If a view is attempted (**S** or **P** commands above) of a file that has not been loaded, the system freezes and must be then be rebooted.

FIELD HEADER SCREEN

## Description

The Field Header Screen displays a Field Header file.

Sample Screen

```
Field Header Screen

DATE:  9 JUL 1986                TIME:  00:00:00

DEB Link:                    T0164

Local Site Name:             SAVONA
Number of Rcvrs:             4

Remote Site Name:            SCHWARZWALD
Number of Xmtrs:             2

Status Comment:              0 -- Operating Normally.



--------------------------------------------------------------------------------

Command:

          X = EXIT to File Selection Screen
```

## Interaction

Commands:

| User Entry | System Response |
|---|---|
| X | Returns to VIEW FIELD DATA -- FILE SELECTION SCREEN (page 42). |

RADIO CALIBRATION SCREEN -- PAGES 1-3

Description

The Radio Calibration Table Screen displays a Radio Calibration file. There are three screens.

Sample Screen

Radio Calibration Screen — Page 1

| CHANNEL | 1 | | 2 | | 3 | | 4 | |
|---|---|---|---|---|---|---|---|---|
| CAL DATE: | 25 JUL 1986 | | 25 JUL 1986 | | 9 JUL 1986 | | 9 JUL 1986 | |
| CAL TIME: | 11:42:10 | | 11:50:05 | | 17:16:17 | | 17:34:16 | |
| REF POWER (dB): | -40.0 | | -40.0 | | -40.0 | | -40.0 | |
| NOISEFLOOR: | -113.0 | | -115.9 | | -114.0 | | -116.1 | |
| FREQUENCY: | 4.537 | | 4.537 | | 4.538 | | 4.538 | |
| ATTENUATION: | POWER | | POWER | | POWER | | POWER | |
| (dB) | (dBm) | (A/D) | (dBm) | (A/D) | (dBm) | (A/D) | (dBm) | (A/D) |
| 0 | -40.0 | 220 | -40.0 | 222 | -40.0 | 210 | -40.0 | 218 |
| 2 | -42.0 | 218 | -42.0 | 220 | -42.0 | 207 | -42.0 | 217 |
| 4 | -44.0 | 216 | -44.0 | 218 | -44.0 | 203 | -44.0 | 216 |
| 6 | -46.0 | 212 | -46.0 | 215 | -46.0 | 198 | -46.0 | 213 |
| 8 | -48.0 | 205 | -48.0 | 210 | -48.0 | 193 | -48.0 | 209 |
| 10 | -50.0 | 199 | -50.0 | 206 | -50.0 | 187 | -50.0 | 205 |
| 12 | -52.0 | 194 | -52.0 | 201 | -52.0 | 180 | -52.0 | 199 |
| 14 | -54.0 | 188 | -54.0 | 195 | -54.0 | 174 | -54.0 | 194 |
| 16 | -56.0 | 182 | -56.0 | 190 | -56.0 | 167 | -56.0 | 189 |

Commands: F = View Next Screen
X = EXIT to File Selection Screen

Sample Screen

Radio Calibration Screen — Page 2

| CHANNEL: | 1 | | 2 | | 3 | | 4 | |
|---|---|---|---|---|---|---|---|---|
| (dB) | (dBm) | (A/D) | (dBm) | (A/D) | (dBm) | (A/D) | (dBm) | (A/D) |
| 18 | -58.0 | 175 | -58.0 | 184 | -58.0 | 161 | -58.0 | 183 |
| 20 | -50.0 | 169 | -60.0 | 179 | -60.0 | 156 | -60.0 | 177 |
| 22 | -62.0 | 163 | -62.0 | 173 | -62.0 | 150 | -62.0 | 171 |
| 24 | -64.0 | 158 | -64.0 | 167 | -64.0 | 143 | -64.0 | 165 |
| 26 | -66.0 | 152 | -66.0 | 161 | -66.0 | 136 | -66.0 | 159 |
| 28 | -68.0 | 146 | -68.0 | 156 | -68.0 | 130 | -68.0 | 154 |
| 30 | -70.0 | 140 | -70.0 | 150 | -70.0 | 125 | -70.0 | 149 |
| 32 | -72.0 | 134 | -72.0 | 144 | -72.0 | 118 | -72.0 | 143 |
| 34 | -74.0 | 127 | -74.0 | 137 | -74.0 | 112 | -74.0 | 136 |
| 36 | -76.0 | 121 | -76.0 | 130 | -76.0 | 105 | -76.0 | 129 |
| 38 | -78.0 | 115 | -78.0 | 124 | -78.0 | 99 | -78.0 | 123 |
| 40 | -80.0 | 109 | -80.0 | 119 | -80.0 | 94 | -80.0 | 118 |
| 42 | -82.0 | 103 | -82.0 | 114 | -82.0 | 88 | -82.0 | 112 |
| 44 | -84.0 | 96 | -84.0 | 107 | -84.0 | 82 | -84.0 | 105 |
| 46 | -86.0 | 90 | -86.0 | 100 | -86.0 | 76 | -86.0 | 99 |
| 48 | -88.0 | 84 | -88.0 | 94 | -88.0 | 69 | -88.0 | 92 |

Commands: F = View Next Screen  B = View Previous Screen
X = EXIT to File Selection Screen

Sample Screen

Radio Calibration Screen — Page 3

| CHANNEL: | 1 | | 2 | | 3 | | 4 | |
|---|---|---|---|---|---|---|---|---|
| (dB) | (dBm) | (A/D) | (dBm) | (A/D) | (dBm) | (A/D) | (dBm) | (A/D) |
| 50 | -90.0 | 78 | -90.0 | 88 | -90.0 | 63 | -90.0 | 87 |
| 52 | -92.0 | 72 | -92.0 | 83 | -92.0 | 57 | -92.0 | 82 |
| 54 | -94.0 | 66 | -94.0 | 77 | -94.0 | 51 | -94.0 | 76 |
| 56 | -96.0 | 59 | -96.0 | 71 | -96.0 | 45 | -96.0 | 70 |
| 58 | -98.0 | 54 | -98.0 | 64 | -98.0 | 39 | -98.0 | 64 |
| 60 | -100.0 | 50 | -100.0 | 60 | -100.0 | 34 | -100.0 | 59 |
| 62 | -102.0 | 46 | -102.0 | 55 | -102.0 | 28 | -102.0 | 54 |
| 64 | -104.0 | 42 | -104.0 | 52 | -104.0 | 23 | -104.0 | 48 |
| 66 | -106.0 | 38 | -106.0 | 48 | -106.0 | 19 | -106.0 | 44 |
| 68 | -108.0 | 36 | -108.0 | 46 | -108.0 | 15 | -108.0 | 41 |
| 70 | -110.0 | 34 | -110.0 | 44 | -110.0 | 14 | -110.0 | 38 |
| 72 | -112.0 | 34 | -112.0 | 42 | -112.0 | 12 | -112.0 | 36 |
| 74 | -114.0 | 33 | -114.0 | 41 | -114.0 | 10 | -114.0 | 33 |
| 76 | -116.0 | 32 | -116.0 | 41 | -116.0 | 10 | -116.0 | 32 |
| 78 | -118.0 | 31 | -118.0 | 40 | -118.0 | 10 | -118.0 | 31 |
| 80 | -120.0 | 30 | -120.0 | 40 | -120.0 | 9 | -120.0 | 31 |

Commands: B = View Previous Screen
X = EXIT to File Selection Screen

## Interaction

Commands:

| User Entry | System Response |
|---|---|
| **F** | Displays the next page. |
| **B** | Displays the previous page. |
| **X** | Returns to VIEW FIELD DATA -- FILE SELECTION SCREEN (page 42). |

## DATA COLLECTION SCREEN

### Description

The Data Collection Screen displays one collection (record) of RSL and Deep Fade statistics.

Sample Screen

```
Data Collection Screen              DEB Link:  TO164          Record #   7 of 65
Local:    SCHWARZWALD               Remote:    SAVONNA
Date: 23 DEC 1986          Time: 04:00:00

Chan   Median     Mean     Std.Dev.   Fade Rate        Correlation
         dBm       dBm       dB          Hz
-------------------------------------------------------------------------------
  1    -86.5     -86.7      5.27        2.69     D12:  0.43      X23: -0.16
  2    -90.5     -90.3      7.30        2.07     C13: -0.42      C24:  0.63
  3    -74.0     -74.5      4.12        3.27     P14:  0.13      D34: -0.11
  4    -84.0     -84.2      6.40        1.89
-------------------------------------------------------------------------------
          Level 1 Deep Fade                          Level 2 Deep Fade
Chan   Mean Dur.  Std.Dev. Dur.     Rate      Mean Dur.    Std.Dev. Dur.    Rate
          sec          sec           sec         sec            sec          sec
-------------------------------------------------------------------------------
  1       0.075       12.44          3.10       0.027          0.55         0.48
  2       0.248      130.11          2.06       0.100          9.86         1.15
  3       0.023        0.38          0.08       0.020          0.00         0.00
  4       0.103       12.36          1.33       0.038          1.55         0.47
-------------------------------------------------------------------------------
Commands:       F = View Next Record          B = View Previous Record
              Jn = Jump to Record # n         X = EXIT to File Selection Screen
```

Interaction

Commands:

| User Entry | System Response |
|---|---|
| **F** | Displays the next record collected. |
| **B** | Displays the previous record collected. |
| **J**[n] **<ENTER>** | Displays the "nth" record collected. |
| **X** | Returns to VIEW FIELD DATA -- FILE SELECTION SCREEN (page 42). |

SUMMARY HEADER EDITING

## Description

This screen is chosen from the ETMP Main Menu, and is preceded by the appropriate Summary Data loading sequence. The Summary Header Editing screen displays the date and time for the three Summary Header records. Each record contains a description of the field system hardware at the receive site as of some date and time in the field.

Sample Screen

```
                          Summary Header Editing

DEB Link #:   TO164
Local (Rcvr) Site:  SCHWARZWALD          Remote (Xmtr) Site:  SAVONA

Header #            Applicable Date **            Time **
-------------------------------------------------------------------------------
  1                  20 MAY 1985                  00:00:00
  2                   0 NUL 1900                  00:00:00
  3                   0 NUL 1900                  00:00:00
-------------------------------------------------------------------------------
** Date/Time of FIRST data record associated with selected Header.
-------------------------------------------------------------------------------
Commands:
              Up, Down Arrows [SHIFT] = Select Header Record
                                    E = EDIT Selected Header
                                    C = COPY Selected Header
                                    I = INITIALIZE Selected Header
                                    P = PRINT Selected Header

                                    X = EXIT to Main Menu
-------------------------------------------------------------------------------
Command Selected:
```

Interaction

Command Selected:

| User Entry | System Response |
|---|---|
| [Arrows] | Moves cursor among the three Header records. The cursor position indicates the selected record. |
| **E** | Calls SUMMARY HEADER SUBSECTION MENU (page 51) for the selected record. |
| **C** | Calls COPY SELECTED HEADER RECORD TO ANOTHER HEADER RECORD (page 75). |
| **I** | Calls SUMMARY HEADER RECORD INITIALIZATION (page 76). |
| **P** | Prints a hard copy of the selected Header record. |
| **X** | Returns to EDIT, TRANSFER, & MERGE PACKAGE (ETMP) -- MAIN MENU (page 33). |

SUMMARY HEADER SUBSECTION MENU

Description

The Summary Header Subsection Menu allows the user to choose the Header record subsection to edit. It also allows the user to save or abandon the updated Header record.

Sample Screen

```
                    Summary Header Subsection Menu


          H = Head Subsection (Data/Time)

          L = Local Site Subsection

          R = Remote Site Subsection

          C = Comment Subsection

          T = Test Parameter Subsection

          E = Equipment Subsection

          O = Open Text Subsection


          S = SAVE Header Record and EXIT

          X = EXIT without saving Header Record

 Enter Selection:
```

Interaction

Enter Selection:

| User Entry | System Response |
|---|---|
| **H** | Enters SUMMARY HEADER -- HEAD SUBSECTION (page 53). |
| **L** | Enters SUMMARY HEADER -- LOCAL SITE (RCVR) SUBSECTION (page 55). |
| **R** | Enters SUMMARY HEADER -- REMOTE SITE (XMTR) SUBSECTION (page 59). |
| **C** | Enters SUMMARY HEADER -- COMMENT SUBSECTION (page 61). |
| **T** | Enters SUMMARY HEADER -- TEST PARAMETER SUBSECTION (page 65). |
| **E** | Enters SUMMARY HEADER -- EQUIPMENT SUBSECTION (page 67). |
| **O** | Enters SUMMARY HEADER -- OPEN TEXT SUBSECTION (page 71). |
| **S** | Saves the updated version of the Header record on the system hard disk and then returns to SUMMARY HEADER EDITING (page 49). |
| **X** | Abandons the updated version of the Header record, and then returns to SUMMARY HEADER EDITING (page 49). |

SUMMARY HEADER -- HEAD SUBSECTION

## Description

The Head Subsection Editor displays the current values of the subsection parameters. The editor has two modes of operation: Edit Mode, which is the default mode; and Command Mode. Use Edit Mode to change parameter values; use Command Mode to save or erase the version being edited.

Sample Screen

```
                        Summary Header -- Head Subsection

Parameter                                   Value
---------                                   -----

Link Number ( <= 16 chars. ) ?              T0164
Local Site Name ( <= 16 chars. ) ?          SCHWARZWALD
Remote Site Name ( <= 16 chars. ) ?         SAVONA
Data applicable (dd mmm yyyy) ?             20 MAY 1985
Time applicable (hh:mm:ss) ?                00:00:00

NOTE:  Date and Time should indicate the STARTING point from which
       the Header Record is applicable, preferably the date and time of
       the FIRST Data Collection (Sampling) record.
```

## Interaction

```
Edit Mode:
     -- to update parameter, type new value at cursor position and
          press "ENTER" key.
     -- use Up, Down Arrow keys to change cursor position.
     -- hit "EXEC" key to change to Command Mode (to save and/or EXIT).
```

| User Entry | System Response |
|---|---|
| **<EXEC>** | Switches to Command Mode. |
| [Arrows] | Moves cursor position among parameters. |
| [value] **<ENTER>** | Assigns new value to parameter at current cursor position. If the value is not valid, the system retains the previous value. |

```
Command Mode:
                    S = Save this version in Memory and EXIT
                    X = EXIT, do NOT save this version

            "EXEC" key = Change to Edit Mode (to update parameters)
```

| User Entry | System Response |
|---|---|
| **<EXEC>** | *Switches to Edit Mode.* |
| **S** | Saves the updated version of the Head subsection in memory, and returns to SUMMARY HEADER SUBSECTION MENU (page 51). |
| **X** | Erases the updated version of the Head subsection from memory, and returns to SUMMARY HEADER SUBSECTION MENU (page 51). |

Notes

To escape while in the process of changing a parameter, type one of the arrow keys. The program will restore the previous parameter value and will then move the cursor to an adjacent parameter in the direction of the arrow key.

SUMMARY HEADER -- LOCAL SITE (RCVR) SUBSECTION ... PAGE 1

## Description

The Local Site Subsection Editor displays the first of two pages of current parameter values. The editor has two modes of operation: Edit Mode, which is the default mode; and Command Mode. Use Edit Mode to change parameter values; use Command Mode to save or erase the version being edited.

**Sample Screen**

Summary Header -- Local Site (Rcvr) Subsection  Page 1 of 2

Local Site Name: SCHWARZWALD

| | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| Ant Height (ft): | 0.0 | 0.0 | 0.0 | 0.0 |
| Ant Area (sq ft): | 0.0 | 0.0 | 0.0 | 0.0 |
| Ant Form Factor:* | ?? | ?? | ?? | ?? |
| Ant Gain (dB): | 0.0 | 0.0 | 0.0 | 0.0 |
| Ant Coupling Loss (dB): | 0.0 | 0.0 | 0.0 | 0.0 |
| Polarization ("V"/"H"): | ? | ? | ? | ? |
| Waveguide Loss (dB): | 0.0 | 0.0 | 0.0 | 0.0 |
| Gain, RF/Cplr Out (dB): | 0.0 | 0.0 | 0.0 | 0.0 |
| Rcv. Frequency (GHz): | 0.000 | 0.000 | 0.000 | 0.000 |
| Assoc. Radio ("A"/"B"): | ? | ? | ? | ? |

* PB = Parabolic Dish, BB = Billboard, OT = Other

## Interaction

Edit Mode:
- -- to update param., type value at cursor pos. & press "ENTER" key.
- -- use Arrow keys to change cursor position.
- -- Hit "CONT" key to view other page of Local Site Subsection.
- -- Hit "EXEC" key to change to Command Mode (to save and/or EXIT).

| User Entry | System Response |
|---|---|
| **<EXEC>** | Switches to Command Mode. |
| **<CONT>** | Displays the other page of parameters. |
| [Arrows] | Moves cursor position among parameters. |
| [value] **<ENTER>** | Assigns new value to parameter at current cursor position. If the value is not valid, the system retains the previous value. |

```
Command Mode:
                  S = Save this version in Memory and EXIT
                  X = EXIT, do NOT save this version
          "CONT" key = Other Page of Local Site Subsection
          "EXEC" key = Change to Edit Mode (to update parameters)
```

| User Entry | System Response |
|---|---|
| **<EXEC>** | Switches to Edit Mode. |
| **<CONT>** | Displays the other page of parameters. |
| **S** | Saves the updated version of the subsection in memory and returns to SUMMARY HEADER SUBSECTION MENU (page 51). |
| **X** | Erases the updated version of the subsection from memory and returns to SUMMARY HEADER SUBSECTION MENU (page 51). |

Notes

To escape while in the process of changing a parameter, type one of the arrow keys. The program will restore the previous parameter value and will then move the cursor to an adjacent parameter in the direction of the arrow key.

SUMMARY HEADER -- LOCAL SITE (RCVR) SUBSECTION ... PAGE 2

## Description

This screen displays the second of two pages of current parameter values. The editor has two modes of operation: Edit Mode, which is the default mode; and Command Mode. Use Edit Mode to change parameter values; use Command Mode to save or erase the version being edited.

Sample Screen

```
                Summary Header -- Local Site (Rcvr) Subsection    Page 2 of 2

  Local Site Name:     SCHWARZWALD

                              1          2          3          4
                          -------    -------    -------    --------

  Noise Bandwidth (MHz):      0.0        0.0        0.0        0.0
  Signal Bandwidth (MHz):     0.0        0.0        0.0        0.0
  FM Threshold (dBm):         0.0        0.0        0.0        0.0
  Typical RSL (dBm):          0.0        0.0        0.0        0.0
  Noisefloor (dBm):           0.0        0.0        0.0        0.0
  Instrument IF Bw (MHz):     0.0        0.0        0.0        0.0
  Dir. Coupler Loss (dB)      0.0        0.0        0.0        0.0
  A/D Chan Assgn, Tape 1: **    ?          ?          ?          ?
  A/D Chan Assgn, Tape 2: **    ?          ?          ?          ?
  ------------------------------------------------------------------------
  **  Use 1 Alphanumeric Character for A/D Slot ID.
```

## Interaction

```
Edit Mode:
      -- to update param., type value at cursor pos. & press "ENTER" key.
      -- use Arrow keys to change cursor position.
      -- Hit "CONT" key to view other page of Local Site Subsection.
      -- Hit "EXEC" key to change to Command Mode (to save and/or EXIT).
```

| User Entry | System Response |
|---|---|
| **<EXEC>** | Switches to Command Mode. |
| **<CONT>** | Displays the other page of parameters. |
| [Arrows] | Moves cursor position among parameters. |
| [value] **<ENTER>** | Assigns new value to parameter at current cursor position. If the value is not valid, the system retains the previous value. |

```
Command Mode:
                    S = Save this version in Memory and EXIT
                    X = EXIT, do NOT save this version
            "CONT" key = Other Page of Local Site Subsection
            "EXEC" key = Change to Edit Mode (to update parameters)
```

| User Entry | System Response |
|---|---|
| **<EXEC>** | Switches to Edit Mode. |
| **<CONT>** | Displays the other page of parameters. |
| **S** | Saves the updated version of the subsection in memory and returns to SUMMARY HEADER SUBSECTION MENU (page 51). |
| **X** | Erases the updated version of the subsection from memory and returns to SUMMARY HEADER SUBSECTION MENU (page 51). |

Notes

To escape while in the process of changing a parameter, type one of the arrow keys. The program will restore the previous parameter value and will then move the cursor to an adjacent parameter in the direction of the arrow key.

SUMMARY HEADER -- REMOTE SITE (XMTR) SUBSECTION

## Description

The Remote Site Subsection Editor displays the current values of the subsection parameters. The editor has two modes of operation: Edit Mode, which is the default mode; and Command Mode. Use Edit Mode to change parameter values; use Command Mode to save or erase the version being edited.

Sample Screen

```
                Summary Header -- Remote Site (Xmtr) Subsection

Remote Site Name:   SAVONA

                                    1           2
                                 -------     -------
Ant Height (ft):                   0.0         0.0
Ant Area (sq ft):                  0.0         0.0
Ant Form Factor: *                  ??          ??
Ant Gain (dB):                     0.0         0.0
Ant Coupling Loss (dB):            0.0         0.0
Polarization ("V"/"H"):              ?           ?
Waveguide Loss (dB):               0.0         0.0
Xmtr Power (W)                     0.0         0.0

-------------------------------------------------------------------
* PB = Parabolic Dish,  BB = Billboard, OT = Other
```

## Interaction

```
Edit Mode:
     -- to update parameter, type new value at cursor position and
          press "ENTER" key.
     -- use Arrow Keys to change cursor position

     -- Hit "EXEC" key to change to Command Mode (to save and/or EXIT)
```

| User Entry | System Response |
|---|---|
| **<EXEC>** | Switches to Command Mode. |
| [Arrows] | Moves cursor position among parameters. |
| [value] **<ENTER>** | Assigns new value to parameter at current cursor position. If the value is not valid, the system retains the previous value. |

```
Command Mode:
                        S = Save this version in Memory and EXIT
                        X = EXIT, do NOT save this version

              "EXEC" key = Change to Edit Mode (to update parameters)
```

| User Entry | System Response |
|---|---|
| **<EXEC>** | Switches to Edit Mode. |
| **S** | Saves the updated version of the subsection in memory and returns to SUMMARY HEADER SUBSECTION MENU (page 51). |
| **X** | Erases the updated version of the subsection from memory and returns to SUMMARY HEADER SUBSECTION MENU (page 51). |

Notes

To escape while in the process of changing a parameter, type one of the arrow keys. The program will restore the previous parameter value and will then move the cursor to an adjacent parameter in the direction of the arrow key.

SUMMARY HEADER -- COMMENT SUBSECTION ... PAGE 1

## Description

This screen displays the first of two pages of parameter values. The editor has two modes of operation: Edit Mode, which is the default mode; and Command Mode. Use Edit Mode to change parameter values; use Command Mode to save or erase the version being edited.

Sample Screen

Summary Header -- Comment Subsection  Page 1 of 2

| Parameter | Comment |
|---|---|
| Ant Height (ft): | 12 |
| Ant Area (sq ft): | 12 |
| Ant Form Factor:* | 12 |
| Ant Gain (dB): | 12 |
| Ant Coupling Loss (dB): | 12 |
| Polarization: | 12 |
| Xmtr. Power (W): | 12 |
| Waveguide Loss (dB): | 12 |
| Gain, RF/Cplr Out (dB): | 12 |
| Rcv. Frequency (GHz): | 12 |

| Code # | Meaning |
|---|---|
| 1 | Casual Estimate |
| 2 | Intermediate Estimate |
| 3 | Serious Estimate |
| 4 | Documented Meas.,Recent |
| 5 | Documented Meas.,Old |
| 6 | Undocumented Measure. |
| 7 | According to Spec. |
| 8 | Known Bound |
| 9 | Computed Value |
| 10 | Default Value |
| 11 | Local Prerogative |
| 12 | Not applicable |

## Interaction

Edit Mode:
- -- to update parameter, type value at cursor position and press "ENTER" key.
- -- use Up, Down Arrow keys to change cursor position.
- -- Hit "CONT" key to view other page of Comment Subsection.
- -- Hit "EXEC" key to change to Command Mode (to save and/or EXIT).

| User Entry | System Response |
|---|---|
| **<EXEC>** | Switches to Command Mode. |
| **<CONT>** | Displays the other page of parameters. |
| [Arrows] | Moves cursor position among parameters. |
| [value] **<ENTER>** | Assigns new value to parameter at current cursor position. If the value is not valid, the system retains the previous value. |

```
Command Mode:
                  S = Save this version in Memory and EXIT
                  X = EXIT, do NOT save this version

          "CONT" key = Other Page of Comment Subsection
          "EXEC" key = Change to Edit Mode (to update parameters)
```

| User Entry | System Response |
|---|---|
| **<EXEC>** | Switches to Edit Mode. |
| **<CONT>** | Displays the other page of parameters. |
| **S** | Saves the updated version of the Comment subsection in memory and returns to SUMMARY HEADER SUBSECTION MENU (page 51). |
| **X** | Erases the updated version of the Comment subsection from memory and returns to SUMMARY HEADER SUBSECTION MENU (page 51). |

Notes

To escape while in the process of changing a parameter, type one of the arrow keys. The program will restore the previous parameter value and will then move the cursor to an adjacent parameter in the direction of the arrow key.

SUMMARY HEADER -- COMMENT SUBSECTION ... PAGE 2

## Description

This screen displays the second of two pages of parameter values. The editor has two modes of operation: Edit Mode, which is the default mode; and Command Mode. Use Edit Mode to change parameter values; use Command Mode to save or erase the version being edited.

Sample Screen

Summary Header -- Comment Subsection  Page 2 of 2

| Parameter | Comment |
|---|---|
| Assoc. Radio | 12 |
| Noise Bandwidth (MHz): | 12 |
| Signal Bandwidth (MHz): | 12 |
| FM Threshold (dBm): | 12 |
| Typical RSL (dBm): | 12 |
| Noisefloor (dBm): | 12 |
| Instrument IF Bw (MHz): | 12 |
| Dir. Coupler Loss (dB): | 12 |
| A/D Chan Assignments: | 12 |

| Code # | Meaning |
|---|---|
| 1 | Casual Estimate |
| 2 | Intermediate Estimate |
| 3 | Serious Estimate |
| 4 | Documented Meas.,Recent |
| 5 | Documented Meas.,Old |
| 6 | Undocumented Measure. |
| 7 | According to Spec. |
| 8 | Known Bound |
| 9 | Computed Value |
| 10 | Default Value |
| 11 | Local Prerogative |
| 12 | Not Applicable |

## Interaction

Edit Mode:
- -- to update parameter, type value at cursor position and press "ENTER" key.
- -- use Up, Down Arrow keys to change cursor position.
- -- Hit "CONT" key to view other page of Comment Subsection.
- -- Hit "EXEC" key to change to Command Mode (to save and/or EXIT).

| User Entry | System Response |
|---|---|
| **<EXEC>** | Switches to Command Mode. |
| **<CONT>** | Displays the other page of parameters. |
| [Arrows] | Moves cursor position among parameters. |
| [value] **<ENTER>** | Assigns new value to parameter at current cursor position. If the value is not valid, the system retains the previous value. |

```
Command Mode:
                  S = Save this version in Memory and EXIT
                  X = EXIT, do NOT save this version

          "CONT" key = Other Page of Comment Subsection
          "EXEC" key = Change to Edit Mode (to update parameters)
```

| User Entry | System Response |
|---|---|
| **<EXEC>** | Switches to Edit Mode. |
| **<CONT>** | Displays the other page of parameters. |
| **S** | Saves the updated version of the Comment subsection in memory and returns to SUMMARY HEADER SUBSECTION MENU (page 51). |
| **X** | Erases the updated version of the Comment subsection from memory and returns to SUMMARY HEADER SUBSECTION MENU (page 51). |

Notes

To escape while in the process of changing a parameter, type one of the arrow keys. The program will restore the parameter's previous value and will then move the cursor to an adjacent parameter in the direction of the arrow key.

SUMMARY HEADER -- TEST PARAMETER SUBSECTION

## Description

The Test Parameter Subsection Editor displays the current values of the subsection parameters. The editor has two modes of operation: Edit Mode, which is the default mode; and Command Mode. Use Edit Mode to change parameter values; use Command Mode to save or erase the version being edited.

Sample Screen

Summary Header -- Test Parameter Subsection

| | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| Deep Fade Upper Thresh (dBm): | 0.0 | 0.0 | 0.0 | 0.0 |
| Deep Fade Lower Thresh (dBm): | 0.0 | 0.0 | 0.0 | 0.0 |
| Upper Bound (dBm): | 0.0 | 0.0 | 0.0 | 0.0 |
| Lower Bound (dBm): | 0.0 | 0.0 | 0.0 | 0.0 |

## Interaction

Edit Mode:
- -- to update parameter, type new value at cursor position and press "ENTER" key.
- -- use Arrow keys to change cursor position.
- -- hit "EXEC" key to change to Command Mode (to save and/or EXIT).

| User Entry | System Response |
|---|---|
| **<EXEC>** | Switches to Command Mode. |
| [Arrows] | Moves cursor position among parameters. |
| [value]<br>**<ENTER>** | Assigns new value to parameter at current cursor position. If the value is not valid, the system retains the previous value. |

```
Command Mode:
                  S = Save this version in Memory and Exit
                  X = EXIT, do NOT save this version

          "EXEC" key = Change to Edit Mode (to update parameters)
```

| User Entry | System Response |
|---|---|
| **<EXEC>** | Switches to Edit Mode. |
| **S** | Saves the updated version of the Test Parameter subsection in memory and returns to SUMMARY HEADER SUBSECTION MENU (page 51). |
| **X** | Erases the updated version of the Test Parameter subsection from memory and returns to SUMMARY HEADER SUBSECTION MENU (page 51). |

Notes

To escape while in the process of changing a parameter, type one of the arrow keys. The program will restore the previous parameter value and will then move the cursor to an adjacent parameter in the direction of the arrow key.

SUMMARY HEADER -- EQUIPMENT SUBSECTION ... PAGE 1

## Description

This screen displays the first of two pages of parameter values. The editor has two modes of operation: Edit Mode, which is the default mode; and Command Mode. Use Edit Mode to change parameter values; use Command Mode to save or erase the version being edited.

Sample Screen

```
                    Summary Header -- Equipment Subsection        Page 1 of 2

Local Site:         SCHWARZWALD

Equipment Parameter          Description (up to 28 chars)
-------------------          ----------------------------
Receiver:
Preamp:
Down Converter
Combiner:
Combiner Type:
Demux:
Receiver (Other info.):
Combiner (Other info.):
```

## Interaction

```
Edit Mode:
     To update parameter, type new value at cursor position and
       press "ENTER" key.
     -- use Up, down Arrow keys to change cursor position.
     -- hit "CONT" key to other page of Equipment Subsection.
     -- hit "EXEC" key to change to Command Mode (to save and/or EXIT).
```

| User Entry | System Response |
|---|---|
| **<EXEC>** | Switches to Command Mode. |
| **<CONT>** | Displays the other page of parameters. |
| [Arrows] | Moves cursor position among parameters. |
| [value] **<ENTER>** | Assigns new value to parameter at current cursor position. If the value is not valid, the system retains the previous value. |

```
Command Mode:
                    S = Save this version in Memory and EXIT
                    X = EXIT, do NOT save this version

           "CONT" key = Other Page of Equipment Subsection
           "EXEC" key = Change to Edit Mode (to update parameters)
```

| User Entry | System Response |
|---|---|
| **<EXEC>** | Switches to Edit Mode. |
| **<CONT>** | Displays the other page of parameters. |
| **S** | Saves the updated version of the Equipment subsection in memory and returns to SUMMARY HEADER SUBSECTION MENU (page 51). |
| **X** | Erases the updated version of the Equipment subsection from memory and returns to SUMMARY HEADER SUBSECTION MENU (page 51). |

Notes

To escape while in the process of changing a parameter, type one of the arrow keys. The program will restore the previous parameter value and will then move the cursor to an adjacent parameter in the direction of the arrow key.

SUMMARY HEADER -- EQUIPMENT SUBSECTION ... PAGE 2

## Description

This screen displays the second of two pages of parameter values. The editor has two modes of operation: Edit Mode, which is the default mode; and Command Mode. Use Edit Mode to change parameter values; use Command Mode to save or erase the version being edited.

Sample Screen

```
                        Summary Header -- Equipment Subsection        Page 2 of 2
Local Site:          SAVONA

Equipment Parameter           Description (up to 28 chars)
-------------------           ----------------------------
Transmitter:
HPA:
Up Converter:
Mux:
Transmitter (Other info.):
```

## Interaction

```
Edit Mode:
     To update parameter, type new value at cursor position and
       press "ENTER" key.
     -- use Up, down Arrow keys to change cursor position.
     -- hit "CONT" key to other page of Equipment Subsection.
     -- hit "EXEC" key to change to Command Mode (to save and/or EXIT).
```

| User Entry | System Response |
|---|---|
| **<EXEC>** | Switches to Command Mode. |
| **<CONT>** | Displays the other page of parameters. |
| [Arrows] | Moves cursor position among parameters. |
| [value] **<ENTER>** | Assigns new value to parameter at current cursor position. If the value is not valid, the system retains the previous value. |

```
Command Mode:
                  S = Save this version in Memory and EXIT
                  X = EXIT, do NOT save this version

          "CONT" key = Other Page of Equipment Subsection
          "EXEC" key = Change to Edit Mode (to update parameters)
```

| User Entry | System Response |
|---|---|
| **<EXEC>** | Switches to Edit Mode. |
| **<CONT>** | Displays the other page of parameters. |
| **S** | Saves the updated version of the Equipment subsection in memory and returns to SUMMARY HEADER SUBSECTION MENU (page 51). |
| **X** | Erases the updated version of the Equipment subsection from memory and returns to SUMMARY HEADER SUBSECTION MENU (page 51). |

Notes

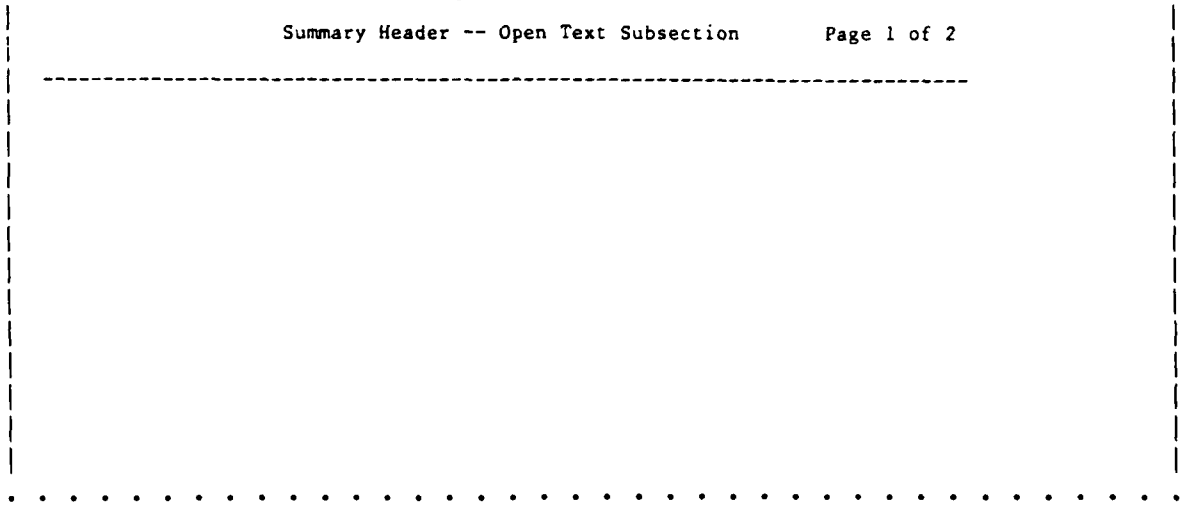
To escape while in the process of changing a parameter, type one of the arrow keys. The program will restore the previous parameter value and will then move the cursor to an adjacent parameter in the direction of the arrow key.

SUMMARY HEADER -- OPEN TEXT SUBSECTION ... PAGE 1

## Description

This screen displays the first of two pages of textual comments. The editor has two modes of operation: Edit Mode, which is the default mode; and Command Mode. Use Edit Mode to change textual comments; use Command Mode to save or erase the version being edited.

Sample Screen




## Interaction

Edit Mode:
- -- to update Open Text Subsection, type text in window (10 lines by 80 spaces) provided on this page.
- -- use Arrow and "ENTER" keys to change cursor position.
- -- hit "CONT" key to Other Page of Open Text Subsection
- -- hit "EXEC" key to change to Command Mode (to save and/or EXIT).

| User Entry | System Response |
|---|---|
| **<EXEC>** | Switches to Command Mode. |
| **<CONT>** | Displays the other page of open text. |
| [text] | Accepts text wherever you type it. |

```
Command Mode:
                  S = Save this version in Memory and EXIT
                  X = EXIT, do NOT save this version

          "CONT" key = Other Page of Open Text Subsection
          "EXEC" key = Change to Edit Mode (to update parameters)
```

| User Entry | System Response |
|---|---|
| **<EXEC>** | Switches to Edit Mode. |
| **<CONT>** | *Displays the other page of open text.* |
| **S** | Saves the updated version of the Open Text subsection in memory and returns to SUMMARY HEADER SUBSECTION MENU (page 51). |
| **X** | Erases the updated version of the Open Text subsection from memory and returns to SUMMARY HEADER SUBSECTION MENU (page 51). |

Notes

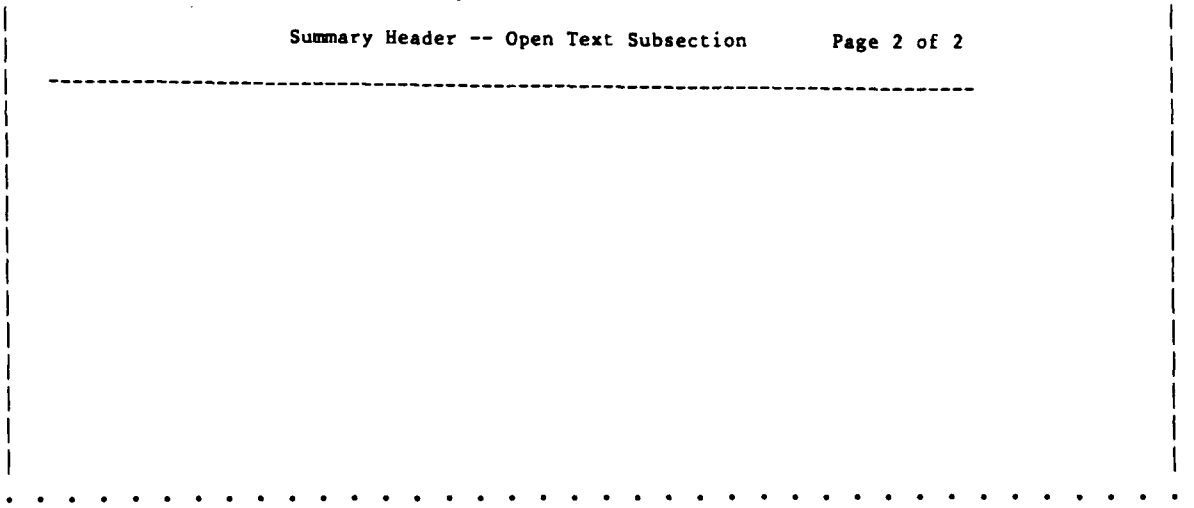
Unlike the other Summary Header subsections, the Open Text subsection allows movement of the cursor anywhere within the text comment window on the screen. Notes may be typed within the window, and it is not necessary to press **<ENTER>** to update the subsection.

SUMMARY HEADER -- OPEN TEXT SUBSECTION ... PAGE 2

## Description

This screen displays the second of two pages of textual comments. The editor has two modes of operation: Edit Mode, which is the default mode; and Command Mode. Use Edit Mode to change textual comments; use Command mode to save or erase the version being edited.

Sample Screen




## Interaction

Edit Mode:
- -- to update Open Text Subsection, type text in window (10 lines by 80 spaces) provided on this page.
- -- use Arrow and "ENTER" keys to change cursor position.
- -- hit "CONT" key to Other Page of Open Text Subsection
- -- hit "EXEC" key to change to Command Mode (to save and/or EXIT).

| User Entry | System Response |
|---|---|
| **<EXEC>** | Switches to Command Mode. |
| **<CONT>** | Displays the other page of open text. |
| [text] | Accepts text wherever you type it. |

```
Command Mode:
                    S = Save this version in Memory and EXIT
                    X = EXIT, do NOT save this version

          "CONT" key = Other Page of Open Text Subsection
          "EXEC" key = Change to Edit Mode (to update parameters)
```

| User Entry | System Response |
|---|---|
| **<EXEC>** | Switches to Edit Mode. |
| **<CONT>** | Displays the other page of open text. |
| **S** | Saves the updated version of the Open Text subsection in memory and returns to SUMMARY HEADER SUBSECTION MENU (page 51). |
| **X** | Erases the updated version of the Open Text subsection from memory and returns to SUMMARY HEADER SUBSECTION MENU (page 51). |

Notes

Unlike the other Summary Header subsections, the Open Text subsection allows movement of the cursor anywhere within the text comment window on the screen. Notes may be typed within the window, and it is not necessary to press **<ENTER>** to update the subsection.

COPY SELECTED HEADER RECORD TO ANOTHER HEADER RECORD

Description

This screen allows the Summary Header record, selected in the Summary Header Editing screen, to be copied to another Header record.

Sample Screen

```
COPY Selected Header Record to another Header Record.


Type Destination Header Record Number (1,2,3), and press "ENTER" key ? 2

Press "ENTER" key to continue with copy,
  or  "X" key to EXIT without copying.
```

Interaction

Type Destination Header Record Number (1,2,3), and press "ENTER" key:

| User Entry | System Response |
|---|---|
| 1 <ENTER><br>2 <ENTER><br>3 <ENTER> | The system decides if the record number entered is valid. If so, the system asks for confirmation. If not, the system displays an error message and repeats the Header record number prompt. |

Press "ENTER" key to continue with copy, or "X" key to EXIT without copying.

| User Entry | System Response |
|---|---|
| **<ENTER>** | Copies the selected Header record to the destination Header record, and then returns to SUMMARY HEADER EDITING (page 49). |
| **X** | Returns to SUMMARY HEADER EDITING without copying the selected Header record (page 49). |

Notes

There are three Header records. The system displays an error message if an attempt is made to copy a record to itself.

## SUMMARY HEADER RECORD INITIALIZATION

Description

This screen permits initialization of a Header record to a set of default parameter values. Since this process destroys the current version of the selected Summary Header record, the system asks for confirmation before purging the record.

Sample Screen

```
Summary Header Record Initialization.

NOTE:  If the Header record DATE is "0 NUL 0", then it has already
       been initialized.
Are you sure you want to purge Header record #1?

Press "ENTER" key to continue with purge,
  or "X" key to EXIT without purging.
```

Interaction

Press "ENTER" key to continue with purge, or "X" key to EXIT without purging.

| User Entry | System Response |
|---|---|
| **<ENTER>** | Initializes the selected Header record to its default parameter status and returns to SUMMARY HEADER EDITING (page 49). |
| **X** | Returns to SUMMARY HEADER EDITING without erasing the current version of the selected Header record (page 49). |

EXCLUDE LIST -- FIELD DATA NOT TO BE TRANSFERRED TO SUMMARY TAPE

Description

This option is selected from the ETMP Main Menu and is preceded by the appropriate Field Data loading sequence. The Exclude List screen displays time intervals for Field Data not included in a merge with a Summary Database.

Sample Screen

```
        Exclude List -- Field Data NOT to be transferred to Summary Tape

 #            START DATE     START TIME          END DATE       END TIME
-------------------------------------------------------------------------
 1          13 JUN 1985      00:00:00          20 JUN 1985      23:59:59
```

A = ADD Item to List
R = REMOVE Item From List
C = CHANGE Item in List
X = EXIT To Main Menu

Interaction

Commands:

| User Entry | System Response |
|---|---|
| **A** | Goes to EXCLUDE SECTION: ADD FUNCTION (page 79) for adding a time interval to the Exclude List. |
| **R** | Goes to EXCLUDE SECTION: REMOVE FUNCTION (page 81) for removing a time interval from the Exclude List. |
| **C** | Goes to EXCLUDE SECTION: CHANGE FUNCTION (page 82) for changing an existing Exclude List time interval. |
| **X** | Saves the Exclude List and returns to EDIT, TRANSFER, & MERGE PACKAGE (ETMP) -- MAIN MENU (page 33). |

Notes

If overlapping time intervals such as 1 Jan 1986 to 4 Feb 1986 and 1 Feb 1986 to 28 Feb 1986 are entered, ETMP displays the intervals as two separate items on the Exclude List. However, when the database merging section is entered (**M** in the ETMP Main Menu), ETMP sorts and reduces the Exclude List, and overlapping intervals will be combined.

EXCLUDE SECTION: ADD FUNCTION

Description

The Exclude Section Add Function allows a time interval to be added to the Exclude List. The interval represents a section of Field Data to be excluded from a database merge.

Sample Screen

```
Exclude Section:  ADD Function

This routine allows you to specify Data Collections
      which should be EXCLUDED from the Transfer to
      the Summary Tape.

Starting Date:  12 JUL 1985
Starting Time:  00:00:00
Ending Date:  15 JUL 1985
Enter Ending Time -- "hh:mm:ss" & press "ENTER" key: 20:00:00
```

Interaction

Enter Starting Date -- "dd mmm yyyy" & press "ENTER" key:

| User Entry | System Response |
|---|---|
| [date] <ENTER> | If the date is valid, the system accepts it as the interval starting date, and rewrites it on the screen (see sample screen above). If the date is not valid, the system displays an error message and repeats the prompt. |

Enter Starting Time -- "hh:mm:ss" & press "ENTER" key:

| User Entry | System Response |
|---|---|
| [time] <ENTER> | If the time is valid, the system accepts it as the interval starting time, and rewrites it on the screen (see sample screen above). If the time is not valid, the system displays an error message and repeats the prompt. |

Enter Ending Date -- "dd mmm yyyy" & press "ENTER" key:

| User Entry | System Response |
|---|---|
| [date]<br><**ENTER**> | If the date is valid, the system accepts it as the interval ending date, and rewrites it on the screen (see sample screen above). If the date is not valid, the system displays an error message and repeats the prompt. |

Enter Ending Time -- "hh:mm:ss" & press "ENTER" key:

| User Entry | System Response |
|---|---|
| [time]<br><**ENTER**> | If the time is valid, the system accepts it as the interval ending time, and rewrites it on the screen. If the interval is valid, the system returns to the Exclude List screen. If the time is not valid, the system displays an error message and repeats the prompt. |

Notes

Notice that in the sample screen above, the starting date, starting time, and ending date have already been entered and accepted, and the ending time prompt is still displayed. Each prompt must be answered correctly before the next is displayed. If an interval in which the ending date/time precedes the starting date/time is entered, the system rejects the interval and repeats the four prompts pictured above. If a valid interval is entered, the system adds the interval to the Exclude List and returns to EXCLUDE LIST -- FIELD DATA NOT TO BE TRANSFERRED TO SUMMARY TAPE (page 77).

EXCLUDE SECTION: REMOVE FUNCTION

Description

The Exclude Section Remove Function is used to remove an interval from the Exclude List.

Sample Screen

```
Exclude Section:  REMOVE Function

This routine allows you to REMOVE Exclude List entries

Enter Index # for entry you would like to REMOVE: 2
```

Interaction

Enter Index # for entry you would like to REMOVE:

| User Entry | System Response |
|---|---|
| **1 <ENTER>**<br>**2 <ENTER>**<br>**3 <ENTER>** | If an index number that is used in the Exclude List is entered, the system removes the corresponding time interval from the list. If an invalid index number is entered, the system displays an error message and repeats the prompt. |

Notes

If the Exclude List is already empty, the system displays an error message, pauses for a few seconds, and then returns to EXCLUDE LIST -- FIELD DATA NOT TO BE TRANSFERRED TO SUMMARY TAPE (page 77).

EXCLUDE SECTION: CHANGE FUNCTION

Description

The Exclude Section Change Function is used to change an existing Exclude List time interval.

Sample Screen

```
Exclude Section:  CHANGE Function

This routine allows you to CHANGE Exclude List Entries

Enter Index # for entry you would like to Change: 1

To CHANGE an entry, Enter correct info & press "ENTER" key after the prompt.
Press "ENTER" key to leave item unchanged.

STARTING DATE: 13 JUN 1985 ?
STARTING TIME: 00:00:00 ?
ENDING DATE: 18 JUN 1985 ?
ENDING TIME: 23:59:59 ? 14:00:00
```

Interaction

Enter Index # for entry you would like to Change:

| User Entry | System Response |
|---|---|
| 1 <ENTER><br>2 <ENTER><br>3 <ENTER> | If an index number that is valid for the Exclude List is entered, the system displays the current value for the interval starting date. If an invalid index number is entered, the system repeats the prompt. |

STARTING DATE: ... date ... ?

| User Entry | System Response |
|---|---|
| <ENTER> | Leaves the interval starting date unchanged. |
| [date]<br><ENTER> | The system replaces the old interval starting date with the date entered. |

STARTING TIME: ... time ... ?

| User Entry | System Response |
|---|---|
| **ENTER** | Leaves the interval starting time unchanged. |
| [time] **<ENTER>** | The system replaces the old interval starting time with the time entered. |

ENDING DATE: ... date ... ?

| User Entry | System Response |
|---|---|
| **ENTER** | Leaves the interval ending date unchanged. |
| [date] **<ENTER>** | The system replaces the old interval ending date with the date entered. |

ENDING TIME: ... time ... ?

| User Entry | System Response |
|---|---|
| **ENTER** | Leaves the interval ending time unchanged. |
| [time] **<ENTER>** | The system replaces the old interval ending time with the time entered. |

LIST OF DATA COLLECTIONS TO BE OMITTED FROM SUMMARY TAPE

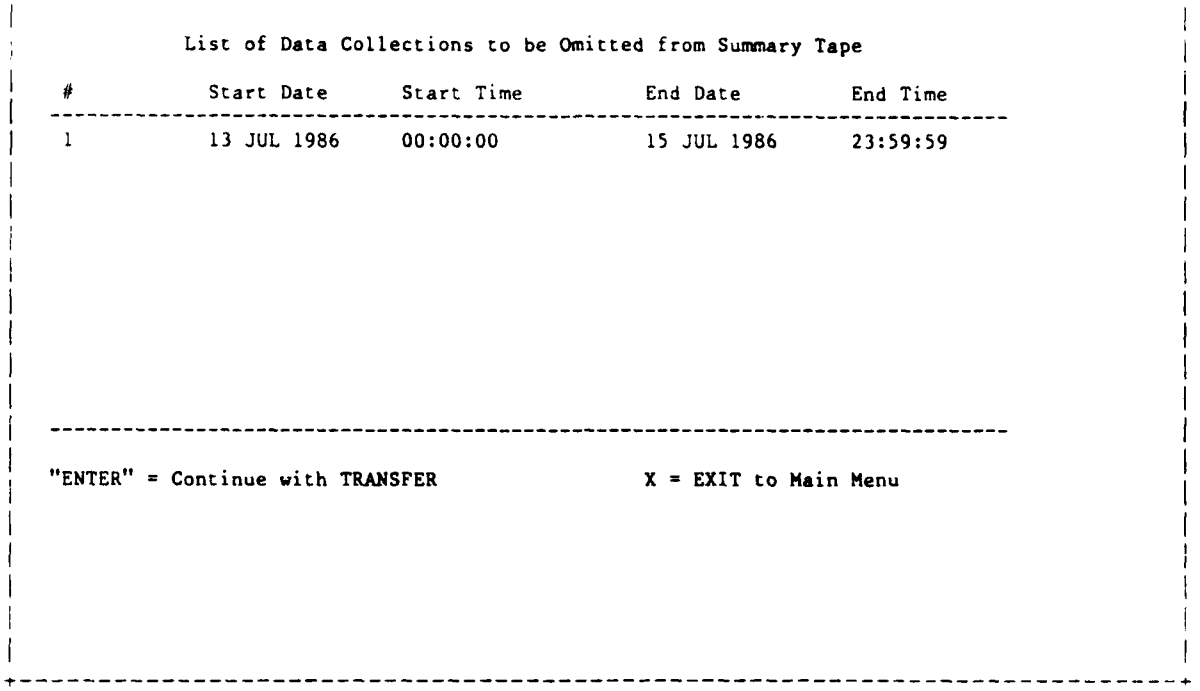
Description

This is the first in a series of screens that are part the of option from the ETMP Main Menu to merge field data with summary data. It is preceded by the appropriate Field Data and Summary Data loading sequences.

This screen presents the Field Data Exclude List created using the **E** option in the ETMP Main Menu. The list has been reduced and sorted; overlapping time intervals have been combined and appear in time order.

This screen does not appear if an Exclude List has not been created. In this case, the system continues with the tape-merging process.

Sample Screen




## Interaction

Press "ENTER" key to continue with merging, or "X" key to EXIT without merging.

| User Entry | System Response |
|---|---|
| <ENTER> | System begins the database merge process. |
| X | Returns to EDIT, TRANSFER, & MERGE PACKAGE (ETMP) -- MAIN MENU (page 33). |

FIELD AND SUMMARY TAPES ARE NOT FROM SAME RECEIVE SITE

Description

If the user chose the **M** option in the ETMP Main Menu and loaded Field and Summary Data that are not from the same DEB link and receive site, this error screen is displayed.

Sample Screen

```
Field and Summary Tapes are NOT from same Receive Site.


                              Remote Site         Local Site

Field tape Header:            SAVONA              SCHWARZWALD
Summary tape HEADER:          SCHWARZWALD         SAVONA


Press "ENTER" key to return to Main Menu.
```

Interaction

Press "ENTER" key to return to Main Menu

| User Entry | System Response |
|---|---|
| <ENTER> | The merge cannot be completed. The system returns to EDIT, TRANSFER, & MERGE PACKAGE (ETMP) -- MAIN MENU (page 33) without merging Field Data with the Summary Database. |

THE FIELD TAPE IS OUT OF SEQUENCE WITH THE CURRENT SUMMARY TAPE

Description

Because of limited hard disk space, ETMP only merges Field Data that is chronologically later than the current last date/time contained by the Summary Tape. This error screen indicates that the Field Tape that has been loaded is not later than the end of the Summary Tape.

If the Field Tape is in sequence with the current Summary Tape, the system goes to PLEASE UNLOAD FIELD TAPE FROM DRIVE #41 (page 86).

Sample Screen

```
The Field tape is out of sequence with the current Summary tape.


Press "ENTER" key to return to Main Menu
```

## Interaction

Press "ENTER" key to return to Main Menu

| User Entry | System Response |
|---|---|
| **<ENTER>** | The merge cannot be completed. The system returns to EDIT, TRANSFER, & MERGE PACKAGE (ETMP) -- MAIN MENU (page 33) without merging Field Data with Summary Database. |

PLEASE UNLOAD FIELD TAPE FROM DRIVE #41

## Description

The system prompts the user to remove the Field Tape from its drive and replace it with a blank 600-foot tape. The Field Data has been copied to the hard disk at this point, and the blank tape is loaded to copy the merged summary database and the existing field data.

Sample Screen

```
Please UNLOAD Field tape from Drive #41:

LOAD a blank 600 ft. tape in Drive #41:
Make sure the write protect switch is NOT in the "SAFE" position.

     This tape will become the new Summary tape after the
Field data has been merged with the existing Summary tape.

Press "ENTER" key after the blank tape has been loaded.
```

Interaction

Press "ENTER" key after the blank tape has been loaded.

| User Entry | System Response |
|---|---|
| **<ENTER>** | If a blank 600-foot tape is loaded properly, the system begins the database merge process. If the system can not write to the tape, it displays an error message and repeats the prompt. |

Notes

Make sure that the write-protect switch is not set to "SAFE". The system will try to write to the tape.

SUMMARY TAPE IS FULL. PLEASE UNLOAD IT FROM DRIVE #42

Description

If the merge is successful and the message "*** Database Merge Completed ***" is displayed on the screen, the user presses **<ENTER>** and the system returns to EDIT, TRANSFER, & MERGE PACKAGE (ETMP) -- MAIN MENU (page 33).

If the new summary tape is filled during the merge, then the message "Summary tape is full. Please UNLOAD it from Drive #42:" appears. That is, the Summary Tape contains 32,000 data collection intervals. The system asks that the full tape be replaced with a "blank" uninitialized 600-foot tape. ETMP will resume merging the database after initializing the blank tape.

Sample Screen

```
Summary tape is full.  Please UNLOAD it from Drive #42:

LOAD a blank 600 ft. tape in Drive #42:
Make sure the write protect switch is NOT in the "SAFE" position.

This tape will contain the remaining Field data
which did not fit on the full Summary tape.

Press "ENTER" key after the blank tape has been loaded.
```

Interaction

Press "ENTER" key after the blank tape has been loaded.

| User Entry | System Response |
|---|---|
| **<ENTER>** | Initializes the blank tape and resumes merging the database. |

Notes

Before **<ENTER>** is pressed, the full Summary Tape must be removed from the indicated tape drive and replaced with a blank 600-foot tape. Wait until the "BUSY" light goes out, signifying that the system has finished loading the tape.

*** DATABASE MERGE COMPLETED ***

Description

The screen appears when ETMP has successfully merged the Field Data with the Summary Database.

Sample Screen

```
*** Database Merge Completed ***

Press "ENTER" to return to the Main Menu.
```

Interaction

Press "ENTER" key to return to the Main Menu.

| User Entry | System Response |
|---|---|
| **<ENTER>** | Returns to EDIT, TRANSFER, & MERGE PACKAGE (ETMP) -- MAIN MENU (page 33). |

INITIALIZATION OF A BLANK TAPE CARTRIDGE

Description

This screen is selected from the ETMP Main Menu. This is the first of two screens for creating a new Summary Tape from a blank 600-foot tape. The system asks for confirmation prior to proceeding with initialization of the tape, which destroys any previous information stored on that tape.

A Summary Tape must only be initialized for the first Field Tape of a receive site. As no Summary Tape exists, one must be created by using the I option in the SGAP Main Menu.

Sample Screen

```
                    Initialization of a Blank Tape Cartridge


 -- The INITIALIZE function creates a Summary Tape directory on a
    blank tape cartridge.

 -- This function must be used before the first Field Tape from a
    Field system can be merged onto an empty Summary Tape.

 Are you sure you want to initialize the Summary Tape.
 -- Press "ENTER" key to initialize the Summary Tape.

 -- Press "X" to the Main Menu.
```

Interaction

Press "ENTER" key to initialize the Summary Tape, or "X" to return to the ETMP Main Menu.

| User Entry | System Response |
|---|---|
| **<ENTER>** | Displays PLEASE LOAD A BLANK TAPE (page 90). |
| **X** | Returns to EDIT, TRANSFER, & MERGE PACKAGE (ETMP) -- MAIN MENU (page 33) without initializing a tape. |

PLEASE LOAD A BLANK TAPE

Description

This is the second screen used to create an empty Summary Tape from a blank 600-foot tape.

Before **<ENTER>** is pressed, a blank 600-foot tape must be inserted into one of the system's drives (drive #41 or #42); the "BUSY" light must go out before loading is complete. If the blank is loaded in drive #41, it will be initialized regardless of the condition of drive #42 (empty, loaded with a blank tape, or loaded with a Summary or Field tape). If the blank is loaded in drive #42, it will be initialized if drive #41 is loaded with a Summary or Field tape, but a warning (see below) will be issued if drive #41 is empty.

Sample Screen

```
Please LOAD a blank tape.

Press "ENTER" key after the tape has been loaded
   or "X" to return to the Main Menu.
```

Interaction

Press "ENTER" key after the tape has been loaded, or "X" to return to the Main Menu.

| User Entry | System Response |
|---|---|
| **<ENTER>** | Initializes the blank tape as an empty Summary Tape. |
| **X** | Returns to EDIT, TRANSFER, & MERGE PACKAGE (ETMP) -- MAIN MENU (page 33) without initializing a tape. |

Warning: There is no blank tape to initialize. Please LOAD a blank 600 foot tape.

| User Entry | System Response |
|---|---|
| ...load blank tape... **<ENTER>** | Initializes the blank tape as an empty Summary Tape if it was loaded in drive #41, initializes the blank tape if it was loaded in drive #42 and drive #41 has a Field or Summary tape, and repeats the warning if it was loaded in drive #42 and drive #41 is empty. |

# SECTION 6

# SGAP SCREEN DESCRIPTIONS

## INTRODUCTION

This section presents a detailed screen-by-screen description of the SGAP. The SGAP SCREEN INDEX subsection contains a listing of the first lines of SGAP screens, and the page number where the description of the screen can be found. The SCREEN RELATIONSHIPS subsection contains flow charts displaying the relationships between SGAP screens. Finally, for each screen, this section contains a text description, a picture, and a guide to interacting with the screen.

## SGAP SCREEN INDEX

Table 6-1 contains a listing of the first lines of the SGAP screens and their respective page numbers.

Table 6-1. SGAP Screen Index

Table 6-1. (Concluded)

| (First Line of Screen | Page) |
|---|---|
| Plotter Channel Color Selection | 121 |
| Plotter Channel Output Menu | 119 |
| Plotter Correlation Coef Color Selection | 123 |
| Plotter Correlation Coef Output Menu | 120 |
| Plotter Graph Label Color Selection | 125 |
| Season Resolution Menu | 110 |
| Season Selection | 115 |
| Statistical Parameter Menu | 98 |
| Statistics Graphic Analysis Package (SGAP) -- Main Menu | 96 |
| Time Scale Menu | 104 |
| Year Selection | 116 |

SCREEN RELATIONSHIPS

Figure 6-1 presents the screen flow for loading Summary Tapes in SGAP, for selecting statistical parameters and output formats, and for selecting time scales, data point resolutions, and analysis intervals.

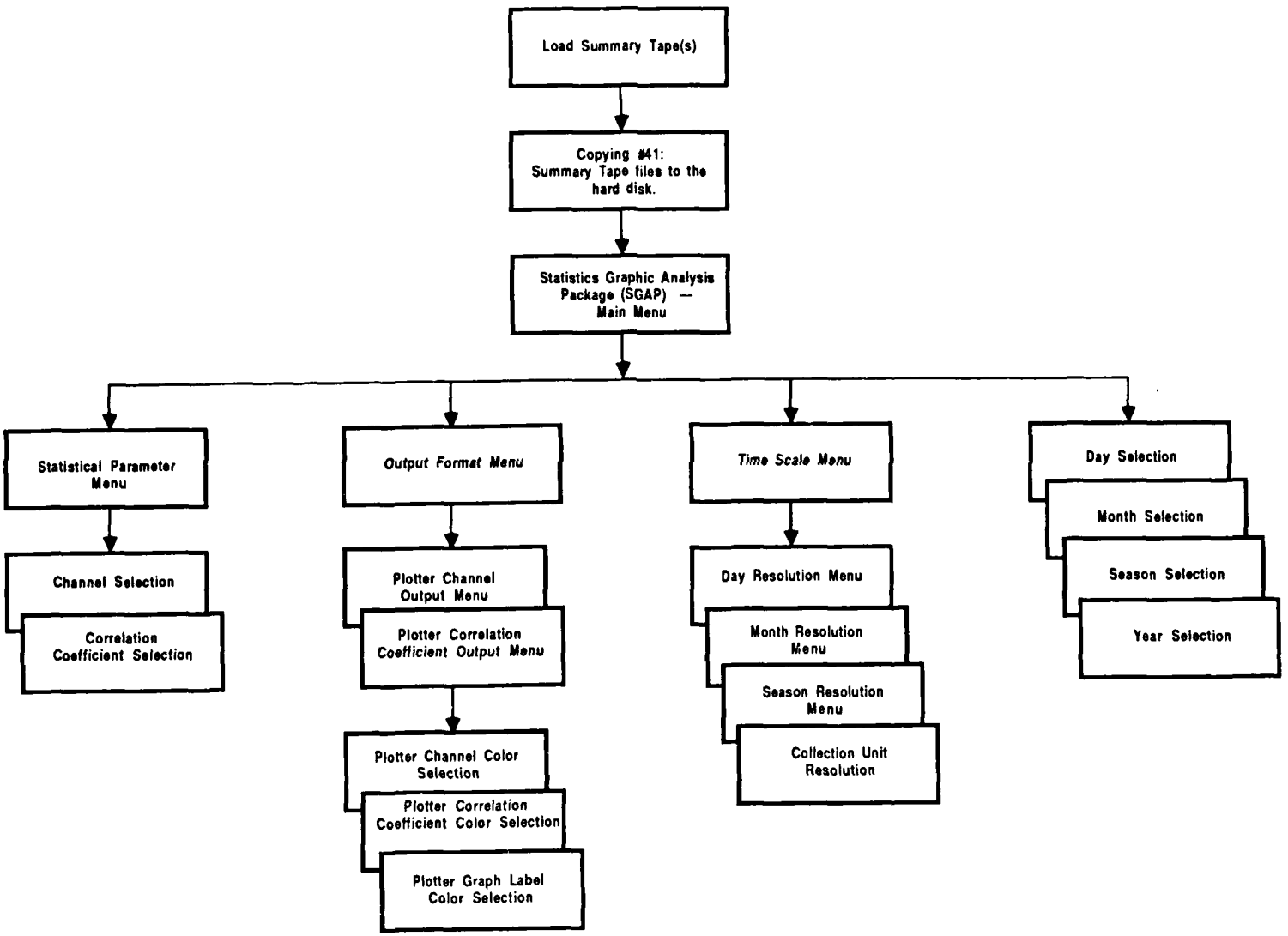



Figure 6-1. SGAP Screen Flow

LOAD SUMMARY TAPE(S)

Description

The first screen for SGAP prompts the user to load one or two Summary Tapes. The current version of SGAP only handles one Summary Tape. This will be enhanced in a future version. If two Summary Tapes are loaded, they must be from the same receive site of the same DEB link. The system displays an error message under the following conditions: no tapes are loaded; a tape that is not a Summary Tape is loaded; or two Summary Tapes from different receive sites are loaded.

Sample Screen

```
Load Summary Tape(s)

   (1) LOAD First Summary Tape in Drive #41
   (2) LOAD Second Summary Tape in Drive #42

Press "ENTER" key to continue, "X" to EXIT the program.
```

Interaction

Press "ENTER" key to continue, "X" to EXIT the program.

| User Entry | System Response |
|---|---|
| <ENTER> | If Summary Tapes have been loaded properly, the system goes to COPYING DRIVE #41: SUMMARY TAPE FILES TO THE HARD DISK (page 95). If you have supplied improper input tapes to the system, the system displays an error message and returns to LOAD SUMMARY TAPE(S) (page 94). |
| X | Quits SGAP and returns to SYSTEM LOGON PROCEDURE (page 16). |

## COPYING DRIVE #41: SUMMARY TAPE FILES TO THE HARD DISK

### Description

This screen issues a message that the Summary Tape files are being copied to one of the system's hard disks.

Sample Screen

```
Copying Drive #41: Summary tape files to the hard disk.

... Copying Index file ...
... Copying Summary Header file ...
... Copying Calendar file ...
```

### Interaction

No user interaction is required. When the system finishes copying the files to the hard disk, it erases this screen and returns to STATISTICS GRAPHIC ANALYSIS PACKAGE (SGAP) -- MAIN MENU (page 96).

SGAP -- MAIN MENU

Description

This is the main controlling menu for SGAP. From this menu, an "analysis environment" may be set up. The analysis environment consists of the statistic to be analyzed, the time interval of the analysis, specific time factors, and the output. For each element of the environment, the SGAP Main Menu displays the current value to the right of the menu option. A day-by-day calendar of the Summary Tape database may be printed from this menu. This calendar contains the number of collection cycles stored for each day covered by the receive site Summary Tape database.

Sample Screen

```
        Statistics Graphic Analysis Package (SGAP) -- Main Menu

SITE: SAVONA                Tape range: 10 JUL 1986  -->  17 MAY 1987

Selection                                Current Value
---------                                -------------

0) Quit Program

1) Statistical Parameter / Channel(s)    Median: 1 2 3 4
2) Time Scale / Data Point Resolution    Day/ Hour
3) Analysis Interval                     10 JUL 1986  -->  10 JUL 1986
4) Output Format                         Plotter/ 2 3 4 5
                                         Graph Label Color - 1
5) Print Summary Calendar
6) Proceed with Analysis

Enter Selection (0..6):
```

Interaction

Enter Selection (0..6):

| User Entry | System Response |
|---|---|
| **0 <ENTER>** | Quits SGAP and returns to SYSTEM LOGON PROCEDURE (page 16). |
| **1 <ENTER>** | Enters STATISTICAL PARAMETER MENU (page 98). |
| **2 <ENTER>** | Enters TIME SCALE MENU (page 104). |
| **3 <ENTER>** | Enters one of four screens for changing the analysis interval -- DAY SELECTION (page 113), MONTH SELECTION (page 114), SEASON SELECTION (page 115), or YEAR SELECTION (page 116) -- according to the current Time Scale (day, month, season, or year). |
| **4 <ENTER>** | Enters OUTPUT FORMAT MENU (page 117). |
| **5 <ENTER>** | Prints the day-by-day Summary Database Calendar. |
| **6 <ENTER>** | Begins the analysis and output. |

STATISTICAL PARAMETER MENU

Description

The Statistical Parameter Menu, selected from the SGAP Main Menu, allows the user to choose parameters to be analyzed.

Sample Screen

```
Statistical Parameter Menu


0) EXIT to Main Menu

1) Median RSL
2) Mean RSL
3) Mean RSL with Standard Deviation
4) Delta (Median RSL - Mean RSL)

5) RSL Probability Function

6) Fade Rate
7) Correlation Coefficients
8) Deep Fade Statistics

9) Change Channel Selections


Enter Selection (0..9):
```

Interaction

Enter Selection (0..9):

| User Entry | System Response |
|---|---|
| **0 <ENTER>** | Returns to STATISTICS GRAPHIC ANALYSIS PACKAGE (SGAP) -- MAIN MENU (page 96) without changing the statistical parameter. |
| **1 <ENTER>** | Chooses the Median RSL as the statistical parameter and enters CHANNEL SELECTION (page 100). |
| **2 <ENTER>** | Chooses the Mean RSL as the statistical parameter and enters CHANNEL SELECTION (page 100). |
| **3 <ENTER>** | Chooses the Mean RSL with the Standard Deviation as the statistical parameter and enters CHANNEL SELECTION (page 100). |
| **4 <ENTER>** | Chooses the Delta (difference between Median RSL and Mean RSL) as the statistical parameter and enters CHANNEL SELECTION (page 100). |
| **5 <ENTER>** | Chooses the RSL Probability Function as the statistical parameter and enters CHANNEL SELECTION (page 100). |
| **6 <ENTER>** | Chooses the Fade Rate as the statistical parameter and enters CHANNEL SELECTION (page 100). |
| **7 <ENTER>** | Chooses the Correlation Coefficients as the statistical parameter and enters CORRELATION COEFFICIENT SELECTION (page 102). |
| **8 <ENTER>** | Chooses the Deep Fade data as the statistical parameter and enters CHANNEL SELECTION (page 100). |
| **9 <ENTER>** | Enters CHANNEL SELECTION (page 100) without changing the statistical parameters. |

CHANNEL SELECTION

Description

The Channel Selection screen specifies the received channel(s) for analysis.

Sample Screen

```
Channel Selection

Options:    "Y" = Include Channel in analysis
            "N" = Do NOT Include Channel

Channel #1 (Y/N): Y
Channel #2 (Y/N): Y
Channel #3 (Y/N): Y
Channel #4 (Y/N): Y
```

Interaction

Channel #1 (Y/N):

| User Entry | System Response |
|---|---|
| **Y <ENTER>** | Includes received channel #1 in the analysis environment. |
| **N <ENTER>** | Does not include received channel #1 in the analysis environment. |

Channel #2 (Y/N):

| User Entry | System Response |
|---|---|
| **Y <ENTER>** | Includes received channel #2 in the analysis environment. |
| **N <ENTER>** | Does not include received channel #2 in the analysis environment. |

Channel #3 (Y/N):

| User Entry | System Response |
|---|---|
| **Y <ENTER>** | Includes received channel #3 in the analysis environment. |
| **N <ENTER>** | Does not include received channel #3 in the analysis environment. |

Channel #4 (Y/N):

| User Entry | System Response |
|---|---|
| **Y <ENTER>** | Includes received channel #4 in the analysis environment. |
| **N <ENTER>** | Does not include received channel #4 in the analysis environment. |

Notes

The default entry for this screen is Y. Therefore, channels may be included in the analysis environment by pressing **<ENTER>** at the above prompts.

CORRELATION COEFFICIENT SELECTION

Description

The Correlation Coefficient Selection screen specifies the received channel correlation coefficient(s) for analysis.

Sample Screen

```
Correlation Coefficient Selection

Options:    "Y" = Include Coefficient in analysis
            "N" = Do NOT Include Coefficient

Coefficient D12 (Y/N): Y
Coefficient X23 (Y/N): Y
Coefficient C13 (Y/N): Y
Coefficient C24 (Y/N): Y
Coefficient P14 (Y/N): Y
Coefficeint D34 (Y/N): Y
```

Interaction

Coefficient D12 (Y/N):

| User Entry | System Response |
|---|---|
| **Y <ENTER>** | Includes the correlation of received channels 1 and 2 in the analysis environment. |
| **N <ENTER>** | Does not include the correlation of received channels 1 and 2 in the analysis environment. |

Coefficient X23 (Y/N):

| User Entry | System Response |
|---|---|
| **Y <ENTER>** | Includes the correlation of received channels 2 and 3 in the analysis environment. |
| **N <ENTER>** | Does not include the correlation of received channels 2 and 3 in the analysis environment. |

Coefficient C13 (Y/N):

| User Entry | System Response |
|---|---|
| **Y <ENTER>** | Includes the correlation of received channels 1 and 3 in the analysis environment. |
| **N <ENTER>** | Does not include the correlation of received channels 1 and 3 in the analysis environment. |

Coefficient C24 (Y/N):

| User Entry | System Response |
|---|---|
| **Y <ENTER>** | Includes the correlation of received channels 2 and 4 in the analysis environment. |
| **N <ENTER>** | Does not include the correlation of received channels 2 and 4 in the analysis environment. |

Coefficient P14 (Y/N):

| User Entry | System Response |
|---|---|
| **Y <ENTER>** | Includes the correlation of received channels 1 and 4 in the analysis environment. |
| **N <ENTER>** | Does not include the correlation of received channels 1 and 4 in the analysis environment. |

Coefficient D34 (Y/N):

| User Entry | System Response |
|---|---|
| **Y <ENTER>** | Includes the correlation of received channels 3 and 4 in the analysis environment. |
| **N <ENTER>** | Does not include the correlation of received channels 3 and 4 in the analysis environment. |

Notes

The default entry for this screen is Y. Therefore, channels may be included in the analysis environment by pressing **<ENTER>** at the above prompts. The correlation coefficients are identified by a letter followed by two digits. The digits identify the two received channels being correlated. The letter describes the relationship of the paths from the two transmitters to the received channels as follows: "P" means the paths are parallel; "X" means the paths cross; "C" means the paths converge; "D" means the paths diverge.

## TIME SCALE MENU

Description

The Time Scale Menu, selected from the SGAP Main Menu, allows the user to select a time scale and a data point resolution unit for the analysis. The time scale is the length of time for the analysis; the resolution unit is the time over which data is averaged to make one point in the analysis output.

Sample Screen

```
Time Scale Menu


0) EXIT to Main Menu

1) Day
2) Calendar Month
3) Season
4) 4 Seasons
5) Calendar Year

6) Change Resolution WITHOUT changing Time Scale




Enter Selections (0..6):
```

Interaction

Enter Selection (0..6):

| User Entry | System Response |
|---|---|
| **0 <ENTER>** | Returns to STATISTICS GRAPHIC ANALYSIS PACKAGE (SGAP) -- MAIN MENU (page 96) without changing the time scale. |
| **1 <ENTER>** | Sets the time scale to one day, and enters DAY RESOLUTION MENU (page 106). |
| **2 <ENTER>** | Sets the time scale to a calendar month, and enters MONTH RESOLUTION MENU (page 108). |
| **3 <ENTER>** | Sets the time scale to one season, and enters SEASON RESOLUTION MENU (page 110). |
| **4 <ENTER>** | Sets the time scale to four seasons. **This option is currently not available.** |
| **5 <ENTER>** | Sets the time scale to a user-specified interval. |
| **6 <ENTER>** | Allows user to change the resolution unit without changing the time scale. It enters the resolution unit menu corresponding to the current value of the time scale. |

Notes

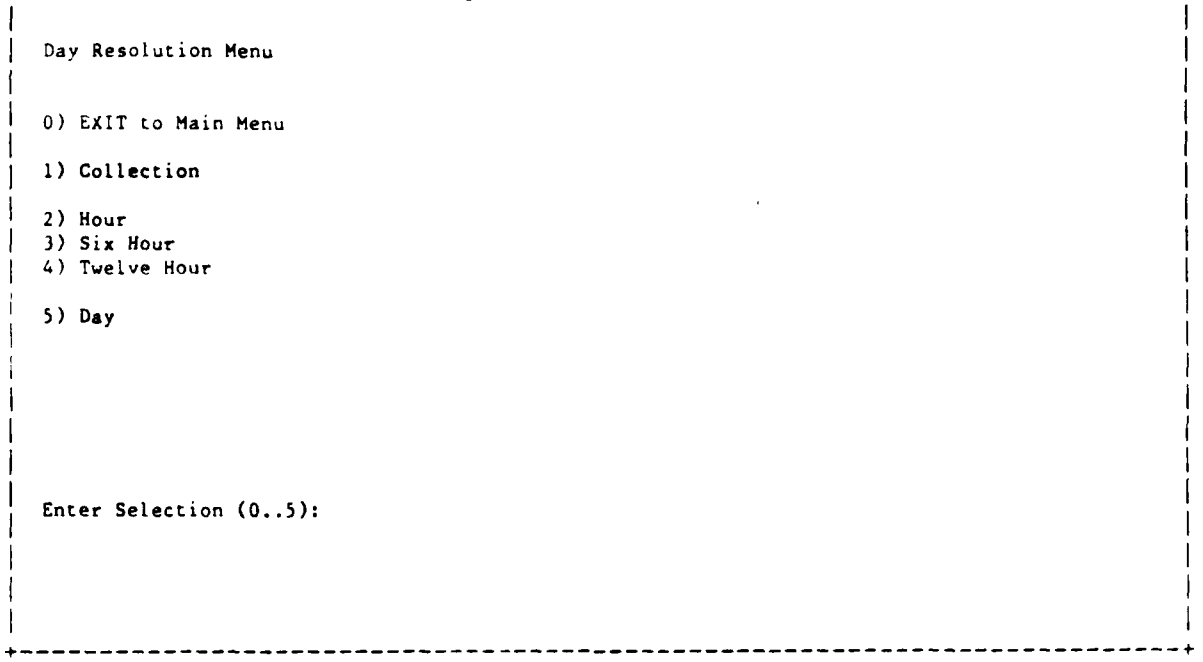
For certain statistical parameters such as correlation coefficients, fade rate, RSL probability function, and deep fade data, the system only has the capability to use the collection unit data point resolution. In this case, the system enters **COLLECTION UNIT RESOLUTION** (page 112) instead of the screen corresponding to the time scale value.

DAY RESOLUTION MENU

Description

The Day Resolution Menu, selected from the Time Scale Menu, allows the user to select a data point resolution for an analysis with a one-day time scale.

Sample Screen



Interaction

Enter Selection (0..5):

| User Entry | System Response |
|---|---|
| **0 <ENTER>** | Returns to STATISTICS GRAPHIC ANALYSIS PACKAGE (SGAP) -- MAIN MENU (page 96) without changing the resolution unit. |
| **1 <ENTER>** | Selects a collection unit data point resolution and returns to STATISTICS GRAPHIC ANALYSIS PACKAGE (SGAP) -- MAIN MENU (page 96). |
| **2 <ENTER>** | Selects a one-hour data point resolution and returns to STATISTICS GRAPHIC ANALYSIS PACKAGE (SGAP) -- MAIN MENU (page 96). |
| **3 <ENTER>** | Selects a six-hour data point resolution and returns to STATISTICS GRAPHIC ANALYSIS PACKAGE (SGAP) -- MAIN MENU (page 96). |
| **4 <ENTER>** | Selects a 12-hour data point resolution and returns to STATISTICS GRAPHIC ANALYSIS PACKAGE (SGAP) -- MAIN MENU (page 96). |
| **5 <ENTER>** | Selects a one-day data point resolution and returns to STATISTICS GRAPHIC ANALYSIS PACKAGE (SGAP) -- MAIN MENU (page 96). |

MONTH RESOLUTION MENU

Description

The Month Resolution Menu, selected from the Time Scale Menu, allows the user to select a data point resolution for an analysis with a one-month time scale.

Sample Screen

```
Month Resolution Menu


0) EXIT to Main Menu

1) Collection

2) Hour
3) Six Hour
4) Twelve Hour

5) Day

6) Month




Enter Selection (0..6):
```

Interaction

Enter Selection (0..6):

| User Entry | System Response |
|---|---|
| **0 <ENTER>** | Returns to STATISTICS GRAPHIC ANALYSIS PACKAGE (SGAP) -- MAIN MENU (page 96) without changing the resolution unit. |
| **1 <ENTER>** | Selects a collection unit data point resolution and returns to STATISTICS GRAPHIC ANALYSIS PACKAGE (SGAP) -- MAIN MENU (page 96). |
| **2 <ENTER>** | Selects a one-hour data point resolution and returns to STATISTICS GRAPHIC ANALYSIS PACKAGE (SGAP) -- MAIN MENU (page 96). |
| **3 <ENTER>** | Selects a six-hour data point resolution and returns to STATISTICS GRAPHIC ANALYSIS PACKAGE (SGAP) -- MAIN MENU (page 96). |
| **4 <ENTER>** | Selects a 12-hour data point resolution and returns to STATISTICS GRAPHIC ANALYSIS PACKAGE (SGAP) -- MAIN MENU (page 96). |
| **5 <ENTER>** | Selects a one-day data point resolution and returns to STATISTICS GRAPHIC ANALYSIS PACKAGE (SGAP) -- MAIN MENU (page 96). |
| **6 <ENTER>** | Selects a one-month data point resolution and returns to STATISTICS GRAPHIC ANALYSIS PACKAGE (SGAP) -- MAIN MENU (page 96). |

SEASON RESOLUTION MENU

Description

The Season Resolution Menu, selected from the Time Scale Menu, allows the user to select a data point resolution for an analysis with a one-season time scale.

Sample Screen

```
Season Resolution Menu


0) EXIT to Main Menu

1) Collection

2) Hour
3) Six Hour
4) Twelve Hour

5) Day

6) Season









Enter Selection (0..6):
```

Interaction

Enter Selection (0..6):

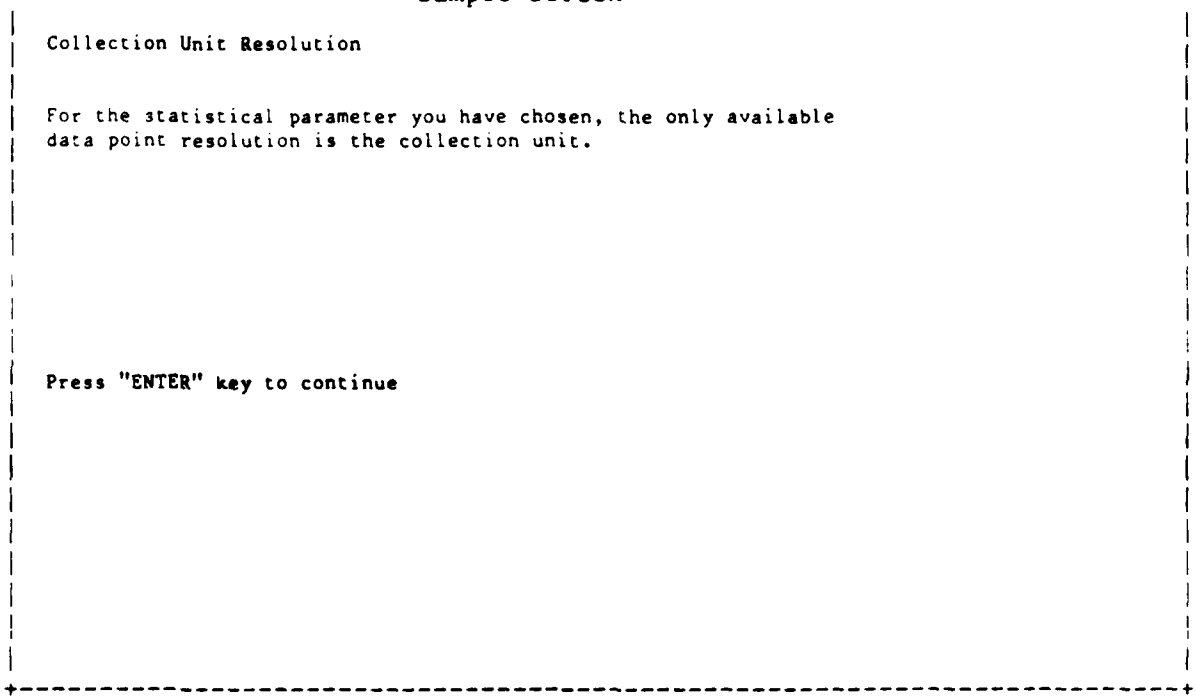
| User Entry | System Response |
|---|---|
| **0 <ENTER>** | Returns to STATISTICS GRAPHIC ANALYSIS PACKAGE (SGAP) -- MAIN MENU (page 96) without changing the resolution unit. |
| **1 <ENTER>** | Selects a collection unit data point resolution and returns to STATISTICS GRAPHIC ANALYSIS PACKAGE (SGAP) -- MAIN MENU (page 96). |
| **2 <ENTER>** | Selects a one-hour data point resolution and returns to STATISTICS GRAPHIC ANALYSIS PACKAGE (SGAP) -- MAIN MENU (page 96). |
| **3 <ENTER>** | Selects a six-hour data point resolution and returns to STATISTICS GRAPHIC ANALYSIS PACKAGE (SGAP) -- MAIN MENU (page 96). |
| **4 <ENTER>** | Selects a 12-hour data point resolution and returns to STATISTICS GRAPHIC ANALYSIS PACKAGE (SGAP) -- MAIN MENU (page 96). |
| **5 <ENTER>** | Selects a one-day data point resolution and returns to STATISTICS GRAPHIC ANALYSIS PACKAGE (SGAP) -- MAIN MENU (page 96). |
| **6 <ENTER>** | Selects a one-season data point resolution and returns to STATISTICS GRAPHIC ANALYSIS PACKAGE (SGAP) -- MAIN MENU (page 96). |

COLLECTION UNIT RESOLUTION

Description

This screen informs the user that the only available data point resolution for the current statistical parameter is the collection unit. These statistical parameters include the Correlation Coefficients, the Fade Rate, the Deep Fade Data, and the RSL Probability Function.

Sample Screen




Interaction

Press "ENTER" key to continue.

| User Entry | System Response |
|---|---|
| **<ENTER>** | Returns to STATISTICS GRAPHIC ANALYSIS PACKAGE (SGAP) -- MAIN MENU (page 96). |

DAY SELECTION

Description

When the Analysis Interval is chosen from the SGAP Main Menu, the system enters one of the following four screens for changing the analysis interval: DAY SELECTION (page 113); MONTH SELECTION (page 114); SEASON SELECTION (page 115); or YEAR SELECTION (page 116). The system enters the screen corresponding to the current time scale setting.

This screen allows the user to select the date of a one-day analysis.

Sample Screen

```
Day Selection

Options:
     Change Analysis Date:  Type date and press "ENTER" key
     Leave Analysis Date Unchanged:  Press "ENTER" key

Starting DATE: 10 JUL 1986 ? 18 JUL 1986
```

Interaction

Starting DATE: ... date ... ?

| User Entry | System Response |
|---|---|
| **<ENTER>** | Leaves the analysis date unchanged. |
| [date] **<ENTER>** | The system replaces the old analysis date with the date that is entered. |

MONTH SELECTION

Description

When the Analysis Interval is chosen from the SGAP Main Menu, the system enters one of the following four screens for changing the analysis interval: DAY SELECTION (page 113); MONTH SELECTION (page 114); SEASON SELECTION (page 115); or YEAR SELECTION (page 116). The system enters the screen corresponding to the current time scale setting.

This screen allows the user to select the calendar month of a one-month analysis.

Sample Screen

```
Month Selection

Options:

     Change Analysis Month:  Type month & year and press "ENTER" key
     Leave Analysis Month Unchanged:  Press "ENTER key

Starting Month: JUL 1986 ? AUG 1986
```

Interaction

Starting MONTH: ... month ... ?

| User Entry | System Response |
|---|---|
| **<ENTER>** | Leaves the analysis month unchanged. |
| [month] **<ENTER>** | The system replaces the old analysis month with the month that is entered. |

SEASON SELECTION

Description

When the Analysis Interval is chosen from the SGAP Main Menu, the system enters one of the following four screens for changing the analysis interval: DAY SELECTION (page 113); MONTH SELECTION (page 114); SEASON SELECTION (page 115); or YEAR SELECTION (page 116). The system enters the screen corresponding to the current time scale setting.

This screen allows the user to select the season and year of a one-season analysis.

Sample Screen

```
Season Selection

Options:
     Change Analysis Season:  Type season & year and press "ENTER" key
     Leave Analysis Season Unchanged:  Press "ENTER" key

Starting Season: SUMMER 1986 ? FALL 1986
```

Interaction

Starting SEASON: ... season year ... ?

| User Entry | System Response |
|---|---|
| <ENTER> | Leaves the analysis season unchanged. |
| [season year] <ENTER> | The system replaces the old analysis season and year with the season and year that is entered. |

YEAR SELECTION

Description

When the Analysis Interval is chosen from the SGAP Main Menu, the system enters one of the following four screens for changing the analysis interval: DAY SELECTION (page 113); MONTH SELECTION (page 114); SEASON SELECTION (page 115); or YEAR SELECTION (page 116). The system enters the screen corresponding to the current time scale setting.

This screen allows the user to select the analysis interval by selecting a start and end date for the desired time period.

Sample Screen

```
Year Selection

Options:
     Change Analysis Year:  Type day month year and press "ENTER" key
     Leave Analysis Year Unchanged:  Press "ENTER" key

Starting Day of Year:  1 JAN 1987 ? 1 JAN 1987

Ending Day of Year:  1 JAN 1987 ? 31 DEC 1987
```

Interaction

Starting Day of Year: ... day month year ... ?

| User Entry | System Response |
|---|---|
| <ENTER> | Leaves the start day of analysis unchanged. |
| [day month year] <ENTER> | The system replaces the old analysis start date with the day, month, and year that is entered. |

Ending Day of Year: ... day month year ... ?

| User Entry | System Response |
|---|---|
| <ENTER> | Leaves the end day of analysis unchanged. |
| [day month year] <ENTER> | The system replaces the old analysis end date with the day, month, and year that is entered. |

OUTPUT FORMAT MENU

Description

This screen, chosen from the SGAP Main Menu, allows the user to choose between the printer and the plotter. In Version 1.0 of LMAS, there is usually no choice of output modes. See the Notes section for this menu (below) for a list of the statistical parameters available in each output mode.

Sample Screen

```
Output Format Menu


0) EXIT to Main Menu

1) Printout
2) Plot




Enter Selection (0..2):
```

Interaction

Enter Selection (0..2):

| User Entry | System Response |
|---|---|
| **0 <ENTER>** | Returns to STATISTICS GRAPHIC ANALYSIS PACKAGE (SGAP) -- MAIN MENU (page 96) without changing the output format. |
| **1 <ENTER>** | Selects Printout as the output format and returns to STATISTICS GRAPHIC ANALYSIS PACKAGE (SGAP) -- MAIN MENU (page 96) . |
| **2 <ENTER>** | Selects Plot as the output format. If the statistical parameter is the correlation coefficient, the system enters PLOTTER CORRELATION COEFFICIENT OUTPUT MENU (page 120); otherwise, the system enters PLOTTER CHANNEL OUTPUT MENU (page 119). |

Notes

In LMAS Version 1.0, printouts are available for the following statistics: Mean RSL with the Standard Deviation, Correlation Coefficients, RSL Probability Function, and Deep Fade data. Plots are available for the following statistics: Mean RSL, Median RSL, Delta (Median - Mean), Fade Rate, Correlation Coefficients, and RSL Probability Function.

PLOTTER CHANNEL OUTPUT MENU

Description

The Plotter Channel Output Menu is a subscreen of the Output Format Menu, and is displayed if the user selected choice 2 in the Output Format Menu. This menu is called if a statistic selected in the Statistical Parameter Menu is based on radio channels, and allows the user to select plotter pens.

Sample Screen

```
Plotter Channel Output Menu


0) EXIT to Main Menu

1) Channel Colors
2) Graph Label Colors









Enter Selection (0..2):
```

Interaction

Enter Selection (0..2):

| User Entry | System Response |
|---|---|
| **0 <ENTER>** | Returns to OUTPUT FORMAT MENU (page 117) without changing the plot pen colors. |
| **1 <ENTER>** | Enters PLOTTER CHANNEL COLOR SELECTION (page 121). |
| **2 <ENTER>** | Enters PLOTTER GRAPH LABEL COLOR SELECTION (page 125). |

## PLOTTER CORRELATION COEFFICIENT OUTPUT MENU

Description

This screen allows the user to select plotter pens for the correlation coefficient plot.

Sample Screen

```
Plotter Correlation Coef Output Menu


0) EXIT to Main Menu

1) Correlation Coef Colors
2) Graph Label Colors









Enter Selection (0..2):
```

Interaction

Enter Selection (0..2):

| User Entry | System Response |
|---|---|
| **0 <ENTER>** | Returns to OUTPUT FORMAT MENU (page 117) without changing the plot pen colors. |
| **1 <ENTER>** | Enters PLOTTER CORRELATION COEFFICIENT COLOR SELECTION (page 123). |
| **2 <ENTER>** | Enters PLOTTER GRAPH LABEL COLOR SELECTION (page 125). |

## PLOTTER CHANNEL COLOR SELECTION

Description

This screen, selected from the Plotter Channel Output Menu, allows you to choose a pen number (color) for each of the four received channels.

Notes

The plotter pen wheel contains six pens. The user places the pens in the wheel and selects the pen numbers to produce a plot using the chosen colors.

Sample Screen

```
Plotter Channel Color Selection

Channel 1 pen number (1..6): 2
Channel 2 pen number (1..6): 3
Channel 3 pen number (1..6): 4
Channel 4 pen number (1..6): 5
```

Interaction

Channel 1 pen number (1..6):

| User Entry | System Response |
|---|---|
| 1 <ENTER> | Selects the chosen pen number for the plot of received channel #1. |
| 2 <ENTER> | |
| 3 <ENTER> | |
| 4 <ENTER> | |
| 5 <ENTER> | |
| 6 <ENTER> | |

Channel 2 pen number (1..6):

| User Entry | System Response |
|---|---|
| 1 <ENTER> | Selects the chosen pen number for the plot of received channel #2. |
| 2 <ENTER> | |
| 3 <ENTER> | |
| 4 <ENTER> | |
| 5 <ENTER> | |
| 6 <ENTER> | |

Channel 3 pen number (1..6):

| User Entry | System Response |
|---|---|
| 1 <ENTER> | Selects the chosen pen number for the plot of received channel #3. |
| 2 <ENTER> | |
| 3 <ENTER> | |
| 4 <ENTER> | |
| 5 <ENTER> | |
| 6 <ENTER> | |

Channel 4 pen number (1..6):

| User Entry | System Response |
|---|---|
| 1 <ENTER> | Selects the chosen pen number for the plot of received channel #4. |
| 2 <ENTER> | |
| 3 <ENTER> | |
| 4 <ENTER> | |
| 5 <ENTER> | |
| 6 <ENTER> | |

PLOTTER CORRELATION COEFFICIENT COLOR SELECTION

Description

This screen, selected from the Plotter Correlation Coefficient Output Menu, allows the user to choose a pen number (color) for each of the six received channel correlation coefficients. This screen appears if the statistics being plotted are correlation coefficients.

Sample Screen

```
Plotter Correlation Coef Color Selection

Correlation Coef 1 pen number (1..6): 2
Correlation Coef 2 pen number (1..6): 3
Correlation Coef 3 pen number (1..6): 4
Correlation Coef 4 pen number (1..6): 5
Correlation Coef 5 pen number (1..6): 2
Correlation Coef 6 pen number (1..6): 1
```

Interaction

Correlation Coefficient 1 pen number (1..6):

| User Entry | System Response |
|---|---|
| 1 <ENTER><br>2 <ENTER><br>3 <ENTER><br>4 <ENTER><br>5 <ENTER><br>6 <ENTER> | Selects the chosen pen number for the plot of the correlation coefficient of received channels 1 and 2. |

Correlation Coefficient 2 pen number (1..6):

| User Entry | System Response |
|---|---|
| 1 <ENTER><br>2 <ENTER><br>3 <ENTER><br>4 <ENTER><br>5 <ENTER><br>6 <ENTER> | Selects the chosen pen number for the plot of the correlation coefficient of received channels 2 and 3. |

Correlation Coefficient 3 pen number (1..6):

| User Entry | System Response |
|---|---|
| **1 <ENTER>** | Selects the chosen pen number for the plot of |
| **2 <ENTER>** | the correlation coefficient of received channels |
| **3 <ENTER>** | 1 and 3. |
| **4 <ENTER>** | |
| **5 <ENTER>** | |
| **6 <ENTER>** | |

Correlation Coefficient 4 pen number (1..6):

| User Entry | System Response |
|---|---|
| **1 <ENTER>** | Selects the chosen pen number for the plot of |
| **2 <ENTER>** | the correlation coefficient of received channels |
| **3 <ENTER>** | 2 and 4. |
| **4 <ENTER>** | |
| **5 <ENTER>** | |
| **6 <ENTER>** | |

Correlation Coefficient 5 pen number (1..6):

| User Entry | System Response |
|---|---|
| **1 <ENTER>** | Selects the chosen pen number for the plot of |
| **2 <ENTER>** | the correlation coefficient of received channels |
| **3 <ENTER>** | 1 and 4. |
| **4 <ENTER>** | |
| **5 <ENTER>** | |
| **6 <ENTER>** | |

Correlation Coefficient 6 pen number (1..6):

| User Entry | System Response |
|---|---|
| **1 <ENTER>** | Selects the chosen pen number for the plot of |
| **2 <ENTER>** | correlation coefficient of received channels |
| **3 <ENTER>** | 3 and 4. |
| **4 <ENTER>** | |
| **5 <ENTER>** | |
| **6 <ENTER>** | |

PLOTTER GRAPH LABEL COLOR SELECTION

Description

This screen, selected from both the Plotter Channel Output Menu and the Plotter Correlation Coefficient Output Menu, allows the user to choose a pen number (color) for the plot labels (axes and headings).

The plotter pen wheel contains six pens, numbered one to six. The user places the pens in the wheel and selects the pen numbers to produce a plot using the chosen colors.

Sample Screen

```
Plotter Graph Label Color Selection

Graph Label pen number (1..6): 1
```

Interaction

Graph Label Pen color (1..6):

| User Entry | System Response |
|---|---|
| 1 <ENTER> | Selects the chosen pen number for the labels of the analysis plot. |
| 2 <ENTER> | |
| 3 <ENTER> | |
| 4 <ENTER> | |
| 5 <ENTER> | |
| 6 <ENTER> | |

# APPENDIX A

# FQLP REPORTS

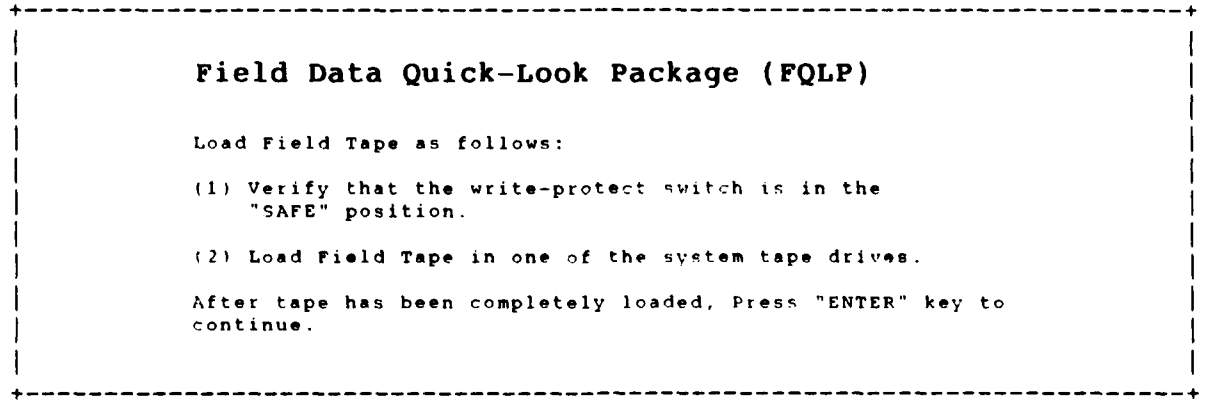
## INTRODUCTION

This appendix presents the FQLP reports. It consists of an explanation of the contents of each different page of the quick-look reports, followed by a picture. The report pages are discussed in the order that they are printed by FQLP, as follows: Field Data Quick-Look Package; Field Header Printout; Radio Calibration Printout; Radio Calibration Evaluation; Field Header Summary; Radio Calibration Summary; and Data Collection Summary.

## FIELD DATA QUICK-LOOK PACKAGE

The FQLP report indicates the date the report was printed and then categorizes the Field Data by file types. For example, the Field Tape pictured here contains one Field Header file, one Radio Calibration file, and 30 RSL Data files. Notice that this tape does not contain any Deep Fade Data files.

The FQLP also maintains a table of files that the system is not able to analyze/reduce. For example, if the Field Tape contained unknown files, such as '1WEATHER, 2WEATHER, ... 10WEATHER,' the FQLP report would list the unknown files by type. The report would contain a line saying, "10 Weather files".



FIELD HEADER PRINTOUT

The Field Header file contains the date and time the header was created at the receive site, the DEB link identification number, the receive (local) site name, the number of received channels, the transmit (remote) site name, the number of transmitters, and a comment about the system's operational status.

The system status comments are as follows:

0 = Operating Normally
1 = Rcvr chan. #1 down
2 = Rcvr chan. #2 down
3 = Rcvr chan. #3 down
4 = Rcvr chan. #4 down
5 = Radio A down
6 = Radio B down
7 = Xmtr A down
8 = Xmtr B down
9 = Two or more of the above
10 = Instrumentation chan. #1 down
11 = Instrumentation chan. #2 down
12 = Instrumentation chan. #3 down
13 = Instrumentation chan. #4 down
14 = More than one instr. ch. down

**Field Header Printout**

```
**********************************************************************

      Created on:     9 JUL 1986      00:00:00

      DEB LINK:  T0164

      Local Site Name:  SAVONA
      Number of Rcvrs:    4

      Remote Site Name:  SCHWARZWALD
      Number of Xmtrs:     2

      Status Comment:    0 -- Operating Normally.
```

RADIO CALIBRATION PRINTOUT

The calibration table for the receive site radio shows the calibration of each of the four received channels. For each channel, the system displays the date and time the channel was last calibrated, the beginning reference point (strongest signal power level) for the calibration table, the signal power level of radio noise (noisefloor), the received channel frequency, and a table containing each attenuation, signal power level, and corresponding A/D conversion value.

## Radio Calibration Printout

| CHANNEL: | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| CAL DATE: | 25 JUL 1986 | 25 JUL 1986 | 9 JUL 1986 | 9 JUL 1986 |
| CAL TIME: | 11:42:10 | 11:50:05 | 17:16:17 | 17:34:16 |
| REF POWER(dB): | -40.0 | -40.0 | -40.0 | -40.0 |
| NOISEFLOOR: | -113.0 | -115.9 | -114.0 | -116.1 |
| FREQUENCY: | 4.537 | 4.537 | 5.438 | 4.538 |
| ATTENUATION | POWER | POWER | POWER | POWER |

| (dB) | (dBM) | (A/D) | (dBM) | (A/D) | (dBM) | (A/D) | (dBM) | (A/D) |
|---|---|---|---|---|---|---|---|---|
| 0 | -40.0 | 220 | -40.0 | 222 | -40.0 | 210 | -40.0 | 218 |
| 2 | -42.0 | 218 | -42.0 | 220 | -42.0 | 207 | -42.0 | 217 |
| 4 | -44.0 | 216 | -44.0 | 218 | -44.0 | 203 | -44.0 | 216 |
| 6 | -46.0 | 212 | -46.0 | 215 | -46.0 | 198 | -46.0 | 213 |
| 8 | -48.0 | 205 | -48.0 | 210 | -48.0 | 193 | -48.0 | 209 |
| 10 | -50.0 | 199 | -50.0 | 206 | -50.0 | 187 | -50.0 | 205 |
| 12 | -52.0 | 194 | -52.0 | 201 | -52.0 | 180 | -52.0 | 199 |
| 14 | -54.0 | 188 | -54.0 | 195 | -54.0 | 174 | -54.0 | 194 |
| 16 | -56.0 | 182 | -56.0 | 190 | -56.0 | 167 | -56.0 | 189 |
| 18 | -58.0 | 175 | -58.0 | 184 | -58.0 | 161 | -58.0 | 183 |
| 20 | -60.0 | 169 | -60.0 | 179 | -60.0 | 156 | -60.0 | 177 |
| 22 | -62.0 | 163 | -62.0 | 173 | -62.0 | 150 | -62.0 | 171 |
| 24 | -64.0 | 158 | -64.0 | 167 | -64.0 | 143 | -64.0 | 165 |
| 26 | -66.0 | 152 | -66.0 | 161 | -66.0 | 136 | -66.0 | 159 |
| 28 | -68.0 | 146 | -68.0 | 156 | -68.0 | 130 | -68.0 | 154 |
| 30 | -70.0 | 140 | -70.0 | 150 | -70.0 | 125 | -70.0 | 149 |
| 32 | -72.0 | 134 | -72.0 | 144 | -72.0 | 118 | -72.0 | 143 |
| 34 | -74.0 | 127 | -74.0 | 137 | -74.0 | 112 | -74.0 | 136 |
| 36 | -76.0 | 121 | -76.0 | 130 | -76.0 | 105 | -76.0 | 129 |
| 38 | -78.0 | 115 | -78.0 | 124 | -78.0 | 99 | -78.0 | 123 |
| 40 | -80.0 | 109 | -80.0 | 119 | -80.0 | 94 | -80.0 | 118 |
| 42 | -82.0 | 103 | -82.0 | 114 | -82.0 | 88 | -82.0 | 112 |
| 44 | -84.0 | 96 | -84.0 | 107 | -84.0 | 82 | -84.0 | 105 |
| 46 | -86.0 | 90 | -86.0 | 100 | -86.0 | 76 | -86.0 | 99 |
| 48 | -88.0 | 84 | -88.0 | 94 | -88.0 | 69 | -88.0 | 92 |
| 50 | -90.0 | 78 | -90.0 | 88 | -90.0 | 63 | -90.0 | 87 |
| 52 | -92.0 | 72 | -92.0 | 83 | -92.0 | 57 | -92.0 | 82 |
| 54 | -94.0 | 66 | -94.0 | 77 | -94.0 | 51 | -94.0 | 76 |
| 56 | -96.0 | 59 | -96.0 | 71 | -96.0 | 45 | -96.0 | 70 |
| 58 | -98.0 | 54 | -98.0 | 64 | -98.0 | 39 | -98.0 | 64 |
| 60 | -110.0 | 50 | -100.0 | 60 | -100.0 | 34 | -100.0 | 59 |
| 62 | -102.0 | 46 | -102.0 | 55 | -102.0 | 28 | -102.0 | 54 |
| 64 | -104.0 | 42 | -104.0 | 52 | -104.0 | 23 | -104.0 | 48 |
| 66 | -106.0 | 38 | -106.0 | 48 | -106.0 | 19 | -106.0 | 44 |
| 68 | -108.0 | 36 | -108.0 | 46 | -108.0 | 15 | -108.0 | 41 |
| 70 | -110.0 | 34 | -110.0 | 44 | -110.0 | 14 | -110.0 | 38 |
| 72 | -112.0 | 34 | -112.0 | 42 | -112.0 | 12 | -112.0 | 36 |
| 74 | -114.0 | 33 | -114.0 | 41 | -114.0 | 10 | -114.0 | 33 |
| 76 | -116.0 | 32 | -116.0 | 41 | -116.0 | 10 | -116.0 | 32 |
| 78 | -118.0 | 31 | -118.0 | 40 | -118.0 | 10 | -118.0 | 31 |
| 80 | -120.0 | 30 | -120.0 | 40 | -120.0 | 9 | -120.0 | 31 |

RADIO CALIBRATION EVALUATION

The Radio Calibration Evaluation report tests the radio calibration table against certain criteria to determine if the calibrations are valid. Each received channel is tested. The user must decide whether to include the data in the Summary database. This report also indicates which channel(s) from the previous calibration table on the Field Tape have and have not been recalibrated.

Figure A-1 presents a valid radio calibration curve. The curve relates known signal power levels with measured A/D values.

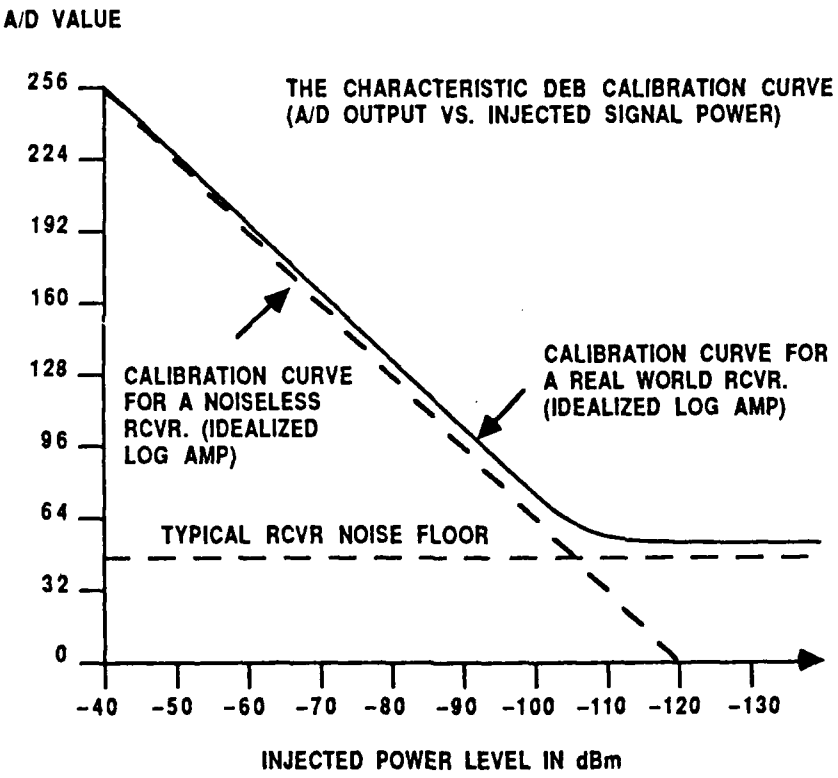



Figure A-1. Valid Calibration Curve

The test criteria applied to a calibration curve are as follows:

1. For any 2 decibel (dB) drop in signal power level, the corresponding drop in the analog-to-digital (A/D) value must be less than 12.

2. At the strongest signal power level, the radio must not be in saturation for attenuations of 0, 2, and 4 dB.

3. As the signal power level decreases, the corresponding drop in A/D value must be greater than 1 for a region of at least 120 A/D values.

4. Within the 120 A/D value region, the calibration curve must have a slope greater than 1.6 A/D per dB.

**Radio Calibration Evaluation**

The evaluation of RF Calibration Tables performed by this program is intended to be a filter to help the user identify possible errors in the Calibration process. The criteria used to determine whether a Calibration passes or fails are not absolute, and therefore need not be accepted in all cases.

CHANNEL #1: PASSES all Calibration tests.
CHANNEL #2: PASSES all Calibration tests.
CHANNEL #3: PASSES all Calibration tests.
CHANNEL #4: PASSES all Calibration tests.

FIELD HEADER SUMMARY

For each Field Header file on the Field Tape, the Field Header Summary report contains the position of the file on the Field Tape, the date and time the file was created, and space for writing notes that could serve as a reference during database merging.

**Field Header Summary**

| POSITION | DATE | TIME | NOTES/COMMENTS |
|---|---|---|---|
| 1 | 9 JUL 1986 | 00:00:00 | |

RADIO CALIBRATION SUMMARY

For each Calibration file on the Field Tape, the Radio Calibration Summary report contains the position of the file on the Field Tape, the date and time each channel was last calibrated, the result of the calibration evaluation (Pass/Fail) for each channel, and space for writing notes that could serve as a reference during database merging.

**Radio Calibration Summary**

| POSITION | CHANNEL | DATE | TIME | EVALUATION | NOTES/COMMENTS |
|---|---|---|---|---|---|
| 2 | 1 | 25 JUL 1986 | 11:42:10 | PASS | |
| | 2 | 25 JUL 1986 | 11:50:05 | PASS | |
| | 3 | 9 JUL 1986 | 17:16:17 | PASS | |
| | 4 | 9 JUL 1986 | 17:34:16 | PASS | |

DATA COLLECTION SUMMARY

For each RSL Data file on the Field Tape, the Data Collection Summary report contains the position of the file on the Field Tape, the date and time that the first data sampling period in the file was initiated, the number of sampling periods (records) in the file, and space for writing notes that could serve as a reference during database merging.

## Data Collection Summary

| POSITION | DATE | START TIME | # OF COLLECTIONS | NOTES/COMMENTS |
|---|---|---|---|---|
| 3 | 18 JAN 1987 | 00:00:00 | 95 | |
| 4 | 19 JAN 1987 | 03:40:24 | 81 | |
| 5 | 20 JAN 1987 | 00:00:00 | 95 | |
| 6 | 21 JAN 1987 | 00:00:00 | 95 | |
| 7 | 22 JAN 1987 | 00:00:00 | 95 | |
| 8 | 23 JAN 1987 | 00:00:00 | 95 | |
| 9 | 24 JAN 1987 | 00:00:00 | 95 | |
| 10 | 25 JAN 1987 | 00:00:00 | 95 | |
| 11 | 26 JAN 1987 | 00:00:00 | 95 | |
| 12 | 27 JAN 1987 | 00:00:00 | 95 | |
| 13 | 28 JAN 1987 | 00:00:00 | 95 | |
| 14 | 29 JAN 1987 | 00:00:00 | 95 | |
| 15 | 30 JAN 1987 | 00:00:00 | 95 | |
| 16 | 31 JAN 1987 | 00:00:00 | 95 | |
| 17 | 1 FEB 1987 | 00:00:00 | 95 | |
| 18 | 2 FEB 1987 | 00:00:00 | 95 | |
| 19 | 3 FEB 1987 | 00:00:00 | 95 | |
| 20 | 4 FEB 1987 | 00:00:00 | 95 | |
| 21 | 5 FEB 1987 | 00:00:00 | 95 | |
| 22 | 6 FEB 1987 | 00:00:00 | 95 | |
| 23 | 7 FEB 1987 | 00:00:00 | 95 | |
| 24 | 8 FEB 1987 | 00:00:00 | 95 | |
| 25 | 9 FEB 1987 | 00:00:00 | 95 | |
| 26 | 10 FEB 1987 | 00:00:00 | 95 | |
| 27 | 11 FEB 1987 | 00:00:00 | 95 | |
| 28 | 12 FEB 1987 | 00:00:00 | 95 | |
| 29 | 13 FEB 1987 | 00:00:00 | 95 | |
| 30 | 14 FEB 1987 | 00:00:00 | 95 | |
| 31 | 15 FEB 1987 | 00:00:00 | 95 | |
| 32 | 16 FEB 1987 | 00:00:00 | 95 | |

# APPENDIX B

# ETMP REPORTS

## INTRODUCTION

This appendix consists of an explanation of each different page of each report, followed by a picture. The reports are presented in alphabetical order, since ETMP does not print them in any particular order. The reports are as follows: Data Collection, Field Header Printout, Field Tape Directory, Radio Calibration Printout, Summary Header Printout -- Page 1, Summary Header Printout -- Page 2.

## DATA COLLECTION

The Data Collection report contains RSL and Deep Fade statistics, or collections, for one day of data sampling. Each page contains statistics for four collections; if no Deep Fade statistics were computed for the day, then each page contains statistics for eight collections. The printout consists of the following: the date and time the collection was begun, the collection record number for the day, the mean RSL, the standard deviation, the median RSL, the fade rate for four received channels, six correlation coefficients for the received channels, the deep fade duration mean, the deep fade duration standard deviation, and the deep fade duration rate for signal levels below two thresholds set in the field system at the receive site.

## DATA COLLECTION: Schwarzwald to Savona

| CHAN | MEDIAN dBm | MEAN dBm | STDDEV dB | FADE RT Hz | CORRELATION |
|---|---|---|---|---|---|
| 23 FEB 1987 00:00:00 # 1 | | | | | |
| 1 | -76.0 | -76.2 | 2.28 | 0.37 | D12: 0.88 X23: -0.49 |
| 2 | -74.5 | -76.4 | 5.59 | 0.55 | C13: -0.57 C24: 0.32 |
| 3 | -75.0 | -74.9 | 5.17 | 0.75 | P14: 0.26 D34: -0.39 |
| 4 | -88.0 | -88.9 | 4.03 | 0.71 | |

| CHAN | Level 1 Deep Fade Dur. MEAN dBm | Dur. STD.DEV. dB | RATE Hz | Level 2 Deep Fade Dur. MEAN dBm | Dur. STD.DEV. dB | RATE Hz |
|---|---|---|---|---|---|---|
| 1 | 0.175 | 43.13 | 0.59 | 0.000 | 0.00 | 0.00 |
| 2 | 0.331 | 291.03 | 0.65 | 0.000 | 0.00 | 0.00 |
| 3 | 0.156 | 73.11 | 0.85 | 0.000 | 0.00 | 0.00 |
| 4 | 900.000 | 0.00 | 0.00 | 0.120 | 23.99 | 0.15 |

| CHAN | MEDIAN dBm | MEAN dBm | STDDEV dB | FADE RT Hz | CORRELATION |
|---|---|---|---|---|---|
| 23 FEB 1987 00:40:00 # 2 | | | | | |
| 1 | -76.0 | -76.2 | 1.77 | 0.55 | D12: 0.78 X23: -0.49 |
| 2 | -75.0 | -75.7 | 3.55 | 0.60 | C13: -0.55 C24: -0.35 |
| 3 | -64.5 | -66.2 | 3.85 | 0.22 | P14: -0.31 D34: 0.83 |
| 4 | -77.0 | -78.1 | 3.02 | 0.36 | |

| CHAN | Level 1 Deep Fade Dur. MEAN dBm | Dur. STD.DEV. dB | RATE Hz | Level 2 Deep Fade Dur. MEAN dBm | Dur. STD.DEV. dB | RATE Hz |
|---|---|---|---|---|---|---|
| 1 | 0.064 | 4.15 | 0.35 | 0.000 | 0.00 | 0.00 |
| 2 | 0.293 | 210.21 | 0.33 | 0.000 | 0.00 | 0.00 |
| 3 | 0.000 | 0.00 | 0.00 | 0.000 | 0.00 | 0.00 |
| 4 | 0.639 | 555.50 | 0.23 | 0.000 | 0.00 | 0.00 |

| CHAN | MEDIAN dBm | MEAN dBm | STDDEV dB | FADE RT Hz | CORRELATION |
|---|---|---|---|---|---|
| 23 FEB 1987 01:00:00 # 3 | | | | | |
| 1 | -76.0 | -76.3 | 1.15 | 0.74 | D12: 0.45 X23: -0.14 |
| 2 | -75.5 | -75.6 | 1.79 | 1.27 | C13: -0.14 C24: -0.37 |
| 3 | -70.5 | -70.6 | 1.99 | 0.18 | P14: -0.32 D34: 0.84 |
| 4 | -78.5 | -80.2 | 3.64 | 0.48 | |

| CHAN | Level 1 Deep Fade Dur. MEAN dBm | Dur. STD.DEV. dB | RATE Hz | Level 2 Deep Fade Dur. MEAN dBm | Dur. STD.DEV. dB | RATE Hz |
|---|---|---|---|---|---|---|
| 1 | 0.020 | 0.00 | 0.00 | 0.000 | 0.00 | 0.00 |
| 2 | 0.027 | 0.76 | 0.44 | 0.000 | 0.00 | 0.00 |
| 3 | 0.000 | 0.00 | 0.00 | 0.000 | 0.00 | 0.00 |
| 4 | 0.265 | 347.21 | 1.23 | 0.000 | 0.00 | 0.00 |

| CHAN | MEDIAN dBm | MEAN dBm | STDDEV dB | FADE RT Hz | CORRELATION |
|---|---|---|---|---|---|
| 23 FEB 1987 01:20:00 # 4 | | | | | |
| 1 | -78.5 | -78.7 | 1.92 | 0.41 | D12: 0.38 X23: -0.18 |
| 2 | -76.0 | -75.8 | 2.46 | 2.98 | C13: 0.10 C24: -0.35 |
| 3 | -71.5 | -72.0 | 3.27 | 0.45 | P14: 0.05 D34: 0.78 |
| 4 | -81.5 | -81.2 | 2.64 | 0.22 | |

FIELD HEADER PRINTOUT

The Field Header file printout contains the date and time the Header was created at the receive site, the DEB link identification number, the receive (local) site name, the number of received channels, the transmit (remote) site name, the number of transmitters, and a comment about the system's operational status. See FIELD HEADER PRINTOUT (page 128) in APPENDIX A for the list of operational status comments.

**Field Header Printout**

Created on: 9 JUL 1986 00:00:00

DEB Link: T0164

Local Site Name SAVONA
Number of Rcvrs: 4

Remote Site Name: SCHWARZWALD
Number of Xmtrs: 2

Status Comment: 0 -- Operating Normally.

FIELD TAPE DIRECTORY

The following is a list of the Field Tape file directory in the order that the files appear on the tape. It consists of the receive site name, the position of each file on the tape, the name of each file, and its creation date and time. A total of 40 files are printed on each page of the report.

## Field Tape Directory

Page 1

DEB Link Number : T0164
Receive Site : SAVONA

| Seq # | File Name | Date Created | Time Created |
|---|---|---|---|
| 1 | 1HDFILE | 01 MAR 1987 | 00:04:08 |
| 2 | 1RFCAL | 18 FEB 1987 | 00:11:51 |
| 3 | 1DATA | 18 FEB 1987 | 00:19:51 |
| 4 | 3DATA | 19 FEB 1987 | 00:19:46 |
| 5 | 2HDFILE | 01 MAR 1987 | 00:06:32 |
| 6 | 2RFCAL | 20 MAR 1987 | 00:18:15 |
| 7 | 3DATA | 20 FEB 1987 | 00:20:55 |
| 8 | 3STAT2 | 20 FEB 1987 | 00:21:25 |
| 9 | 4DATA | 21 FEB 1987 | 00:25:43 |
| 10 | 4STAT2 | 21 FEB 1987 | 00:26:44 |
| 11 | 5DATA | 22 FEB 1987 | 00:25:47 |
| 12 | 5STAT2 | 22 FEB 1987 | 00:26:54 |
| 13 | 6DATA | 23 FEB 1987 | 00:25:54 |
| 14 | 6STAT2 | 23 FEB 1987 | 00:27:06 |
| 15 | 7DATA | 24 FEB 1987 | 00:26:01 |
| 16 | 7STAT2 | 24 FEB 1987 | 00:27:24 |
| 17 | 8DDATA | 25 FEB 1987 | 00:26:21 |
| 18 | 8STAT2 | 25 FEB 1987 | 00:27:53 |
| 19 | 9DATA | 26 FEB 1987 | 00:26:15 |
| 20 | 9STAT2 | 26 FEB 1987 | 00:27:41 |
| 21 | 10DATA | 27 FEB 1987 | 00:26:18 |
| 22 | 10STAT2 | 27 FEB 1987 | 00:27:39 |
| 23 | 11DATA | 28 FEB 1987 | 00:26:14 |
| 24 | 11STAT2 | 28 FEB 1987 | 00:27:28 |
| 25 | 12DATA | 01 MAR 1987 | 00:26:07 |
| 26 | 12STAT2 | 01 MAR 1987 | 00:27:16 |
| 27 | 13DATA | 02 MAR 1987 | 00:26:02 |
| 28 | 13STAT2 | 02 MAR 1987 | 00:27:05 |
| 29 | 14DATA | 03 MAR 1987 | 00:25:55 |
| 30 | 14STAT2 | 03 MAR 1987 | 00:26:53 |
| 31 | 15DATA | 04 MAR 1987 | 00:25:50 |
| 32 | 15STAT2 | 04 MAR 1987 | 00:26:45 |
| 33 | 16DATA | 05 MAR 1987 | 00:26:08 |
| 34 | 16STAT2 | 05 MAR 1987 | 00:27:04 |
| 35 | 17DATA | 06 MAR 1987 | 00:25:54 |
| 36 | 17STAT2 | 06 MAR 1987 | 00:26:55 |
| 37 | 18DATA | 07 MAR 1987 | 00:26:00 |
| 38 | 18STAT2 | 07 MAR 1987 | 00:27:08 |
| 39 | 19DATA | 08 MAR 1987 | 00:26:05 |
| 40 | 19STAT2 | 08 MAR 1987 | 00:27:19 |

Notes

When a Field Tape is copied (copying is done with a system utility), the 'Date Created' of the copy is the date when the copy is made; the date when the original file was created exists only on the original tape.

RADIO CALIBRATION PRINTOUT

The calibration table for the receive site radio shows the calibration of each of the four received channels. For each channel, it displays the date and time the channel was last calibrated, the beginning reference point (strongest signal power level) for the calibration table, the signal power level of radio noise (noisefloor), the received channel frequency, and a table containing each attenuation, signal power level, and corresponding A/D conversion value.

## RADIO CALIBRATION PRINTOUT

| CHANNEL: | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| CAL DATE: | 25 JUL 1986 | 25 JUL 1986 | 9 JUL 1986 | 9 JUL 1986 |
| CAL TIME: | 11:42:10 | 11:50:05 | 17:16:17 | 17:34:16 |
| REF POWER(dB): | -40.0 | -40.0 | -40.0 | -40.0 |
| NOISEFLOOR(DBm) | -113.0 | -115.9 | -114.0 | -116.1 |
| FREQUENCY: | 4.537 | 4.537 | 5.438 | 4.538 |
| ATTENUATION | POWER | POWER | POWER | POWER |

| (dB) | (dBM) | (A/D) | (dBM) | (A/D) | (dBM) | (A/D) | (dBM) | (A/D) |
|---|---|---|---|---|---|---|---|---|
| 0 | -40.0 | 220 | -40.0 | 222 | -40.0 | 210 | -40.0 | 218 |
| 2 | -42.0 | 218 | -42.0 | 220 | -42.0 | 207 | -42.0 | 217 |
| 4 | -44.0 | 216 | -44.0 | 218 | -44.0 | 203 | -44.0 | 216 |
| 6 | -46.0 | 212 | -46.0 | 215 | -46.0 | 198 | -46.0 | 213 |
| 8 | -48.0 | 205 | -48.0 | 210 | -48.0 | 193 | -48.0 | 209 |
| 10 | -50.0 | 199 | -50.0 | 206 | -50.0 | 187 | -50.0 | 205 |
| 12 | -52.0 | 194 | -52.0 | 201 | -52.0 | 180 | -52.0 | 199 |
| 14 | -54.0 | 188 | -54.0 | 195 | -54.0 | 174 | -54.0 | 194 |
| 16 | -56.0 | 182 | -56.0 | 190 | -56.0 | 167 | -56.0 | 189 |
| 18 | -58.0 | 175 | -58.0 | 184 | -58.0 | 161 | -58.0 | 183 |
| 20 | -60.0 | 169 | -60.0 | 179 | -60.0 | 156 | -60.0 | 177 |
| 22 | -62.0 | 163 | -62.0 | 173 | -62.0 | 150 | -62.0 | 171 |
| 24 | -64.0 | 158 | -64.0 | 167 | -64.0 | 143 | -64.0 | 165 |
| 26 | -66.0 | 152 | -66.0 | 161 | -66.0 | 136 | -66.0 | 159 |
| 28 | -68.0 | 146 | -68.0 | 156 | -68.0 | 130 | -68.0 | 154 |
| 30 | -70.0 | 140 | -70.0 | 150 | -70.0 | 125 | -70.0 | 149 |
| 32 | -72.0 | 134 | -72.0 | 144 | -72.0 | 118 | -72.0 | 143 |
| 34 | -74.0 | 127 | -74.0 | 137 | -74.0 | 112 | -74.0 | 136 |
| 36 | -76.0 | 121 | -76.0 | 130 | -76.0 | 105 | -76.0 | 129 |
| 38 | -78.0 | 115 | -78.0 | 124 | -78.0 | 99 | -78.0 | 123 |
| 40 | -80.0 | 109 | -80.0 | 119 | -80.0 | 94 | -80.0 | 118 |
| 42 | -82.0 | 103 | -82.0 | 114 | -82.0 | 88 | -82.0 | 112 |
| 44 | -84.0 | 96 | -84.0 | 107 | -84.0 | 82 | -84.0 | 105 |
| 46 | -86.0 | 90 | -86.0 | 100 | -86.0 | 76 | -86.0 | 99 |
| 48 | -88.0 | 84 | -88.0 | 94 | -88.0 | 69 | -88.0 | 92 |
| 50 | -90.0 | 78 | -90.0 | 88 | -90.0 | 63 | -90.0 | 87 |
| 52 | -92.0 | 72 | -92.0 | 83 | -92.0 | 57 | -92.0 | 82 |
| 54 | -94.0 | 66 | -94.0 | 77 | -94.0 | 51 | -94.0 | 76 |
| 56 | -96.0 | 59 | -96.0 | 71 | -96.0 | 45 | -96.0 | 70 |
| 58 | -98.0 | 54 | -98.0 | 64 | -98.0 | 39 | -98.0 | 64 |
| 60 | -110.0 | 50 | -100.0 | 60 | -100.0 | 34 | -100.0 | 59 |
| 62 | -102.0 | 46 | -102.0 | 55 | -102.0 | 28 | -102.0 | 54 |
| 64 | -104.0 | 42 | -104.0 | 52 | -104.0 | 23 | -104.0 | 48 |
| 66 | -106.0 | 38 | -106.0 | 48 | -106.0 | 19 | -106.0 | 44 |
| 68 | -108.0 | 36 | -108.0 | 46 | -108.0 | 15 | -108.0 | 41 |
| 70 | -110.0 | 34 | -110.0 | 44 | -110.0 | 14 | -110.0 | 38 |
| 72 | -112.0 | 34 | -112.0 | 42 | -112.0 | 12 | -112.0 | 36 |
| 74 | -114.0 | 33 | -114.0 | 41 | -114.0 | 10 | -114.0 | 33 |
| 76 | -116.0 | 32 | -116.0 | 41 | -116.0 | 10 | -116.0 | 32 |
| 78 | -118.0 | 31 | -118.0 | 40 | -118.0 | 10 | -118.0 | 31 |
| 80 | -120.0 | 30 | -120.0 | 40 | -120.0 | 9 | -120.0 | 31 |

SUMMARY HEADER PRINTOUT -- PAGE 1

The following is the first of two pages of the Summary Header Printout, which is a description of a DEB field system's hardware as of a particular date. This page contains the following: the DEB link number, the receive and transmit site names, the applicable date and time, various numerical parameters describing the equipment at the receive site (four channels) and at the transmit site (two signal sources), confidence factors (comments) for each numerical parameter above, and a list of comment code definitions and test thresholds set at certain signal power levels (used for Deep Fade Statistics).

## Summary Header Printout -- Page 1

Link Number T0164
Date applicable: 20 MAY 1986 Time applicable: 00:00:00

| | | Rcvr: SCHWARZWALD | | | | Xmtr: SAVONA | |
|---|---|---|---|---|---|---|---|
| | Cmnt | 1 | 2 | 3 | 4 | 1 | 2 |
| Ant Height (ft): | 12 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Ant Area (sq ft): | 12 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Ant Form Factor:<1> | 12 | ?? | ?? | ?? | ?? | ?? | ?? |
| Ant Gain (dB): | 12 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Ant Cpling Loss (dB): | 12 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Polarization: | 12 | ? | ? | ? | ? | ? | ? |
| WaveGuide Loss (dB): | 12 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Gain RF/Cp Out (dB): | 12 | 0.0 | 0.0 | 0.0 | 0.0 | | |
| Rcv. Freq (GHz): | 12 | 0.0 | 0.0 | 0.0 | 0.0 | | |
| Associated Radio: | 12 | ? | ? | ? | ? | | |
| Noise bw (MHz): | 12 | 0.0 | 0.0 | 0.0 | 0.0 | | |
| Signal bw (MHz): | 12 | 0.0 | 0.0 | 0.0 | 0.0 | | |
| FM Threshold (dBm): | 12 | 0.0 | 0.0 | 0.0 | 0.0 | | |
| Typical rsl (dBm): | 12 | 0.0 | 0.0 | 0.0 | 0.0 | | |
| Noisefloor (dBm): | 12 | 0.0 | 0.0 | 0.0 | 0.0 | | |
| Inst if bw (MHz): | 12 | 0.0 | 0.0 | 0.0 | 0.0 | | |
| Cplr Loss (dB): | 12 | 0.0 | 0.0 | 0.0 | 0.0 | | |
| A/D Ch Asgn, Tape 1: | 12 | ? | ? | ? | ? | | |
| A/D Ch Asgn, Tape 2: | 12 | ? | ? | ? | ? | | |
| xmtr Power (W): | 12 | | | | | 0.0 | 0.0 |

Comment Code Definitions:

| Code # | Meaning | Code # | Meaning |
|---|---|---|---|
| 1 | Casual Estimate | 7 | According to Spec. |
| 2 | Intermediate Estimate | 8 | Known Lower Bound |
| 3 | Serious Estimate | 9 | Known Upper Bound |
| 4 | Documented Meas.,Recent | 10 | Defult Value |
| 5 | Documented Meas.,Old | 11 | Local Preroqative |
| 6 | Undocumented Measure. | 12 | Not Applicable |

| Test Paramenters | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| Upper Threshold (dBm) | 0.0 | 0.0 | 0.0 | 0.0 |
| Lower Threshold (dBm) | 0.0 | 0.0 | 0.0 | 0.0 |
| Upper Bound (dBm) | 0.0 | 0.0 | 0.0 | 0.0 |
| Lower Bound (dBm) | 0.0 | 0.0 | 0.0 | 0.0 |

SUMMARY HEADER PRINTOUT -- PAGE 2

The following is the second page of the Summary Header Printout. This page contains the following: a text description of the major hardware components of the receive and transmit sites; and text containing information about the field system not covered anywhere else in the Header record.

**Summary Header Printout -- Page 2**

| Receiver Equipment | Description (up to 28 characters) |
|---|---|
| Receiver | |
| Preamp | |
| Down Converter | |
| Combiner | |
| Combiner Type | |
| Demux | |
| Receiver (Other info.) | |
| Combiner (Other info.) | |

| Transmitter Equipment | Description (up to 28 characters) |
|---|---|
| Transmitter | |
| HPA | |
| Up Converter | |
| Mux | |
| Transmitter (Other info.) | |

Open Text Subsection -- further description of system.

# APPENDIX C

# SGAP PLOTS AND REPORTS

## INTRODUCTION

This appendix presents the SGAP plots and reports, and consists of an explanation of the contents of each plot and each report page, followed by a picture. Plots are identified by the statistical parameter, such as mean RSL. The statistical parameter is displayed in the plot header information, under the subtitle "PLOT: " (see examples in this appendix). Reports are identified by the title at the top of the page; when a report is more than one page, the example will only show enough pages to illustrate each unique page format. The SGAP reports and plots are presented in alphabetical order, as follows: Calendar Printout, Correlation Coefficient Plot, Correlation Coefficient Report, Deep Fade Report, Delta (Median RSL - Mean RSL) Plot, Fade Rate Plot, Mean RSL Plot, Mean RSL Report, Median RSL Plot, RSL Probability Function Plot, and RSL Probability Function Report.

## CALENDAR PRINTOUT

The Calendar Printout report lists the number of collection cycles for each day of the Summary Database. It is printed in the form of a calendar, with up to twelve months summarized per page. Blank entries are used to show the beginning and end of the Summary Database.

The data collection rate is a variable that is set in the DCS at the receive site. Typically, the system is set up to perform three or four collection cycles per hour. This would result in 72 or 96 collection cycles per day, respectively. However, notice in the sample provided, that most of the calendar entries are either 71 or 95. Often, the DCS misses one collection cycle at the beginning of each day, when it dumps data files from its hard disk to the Field Tape.

## Calendar Printouts:

# of Sampling (Collection) Cycles for each Day of the Summary Period.

PRINTER on: 11 JUN 1987 09:09:05

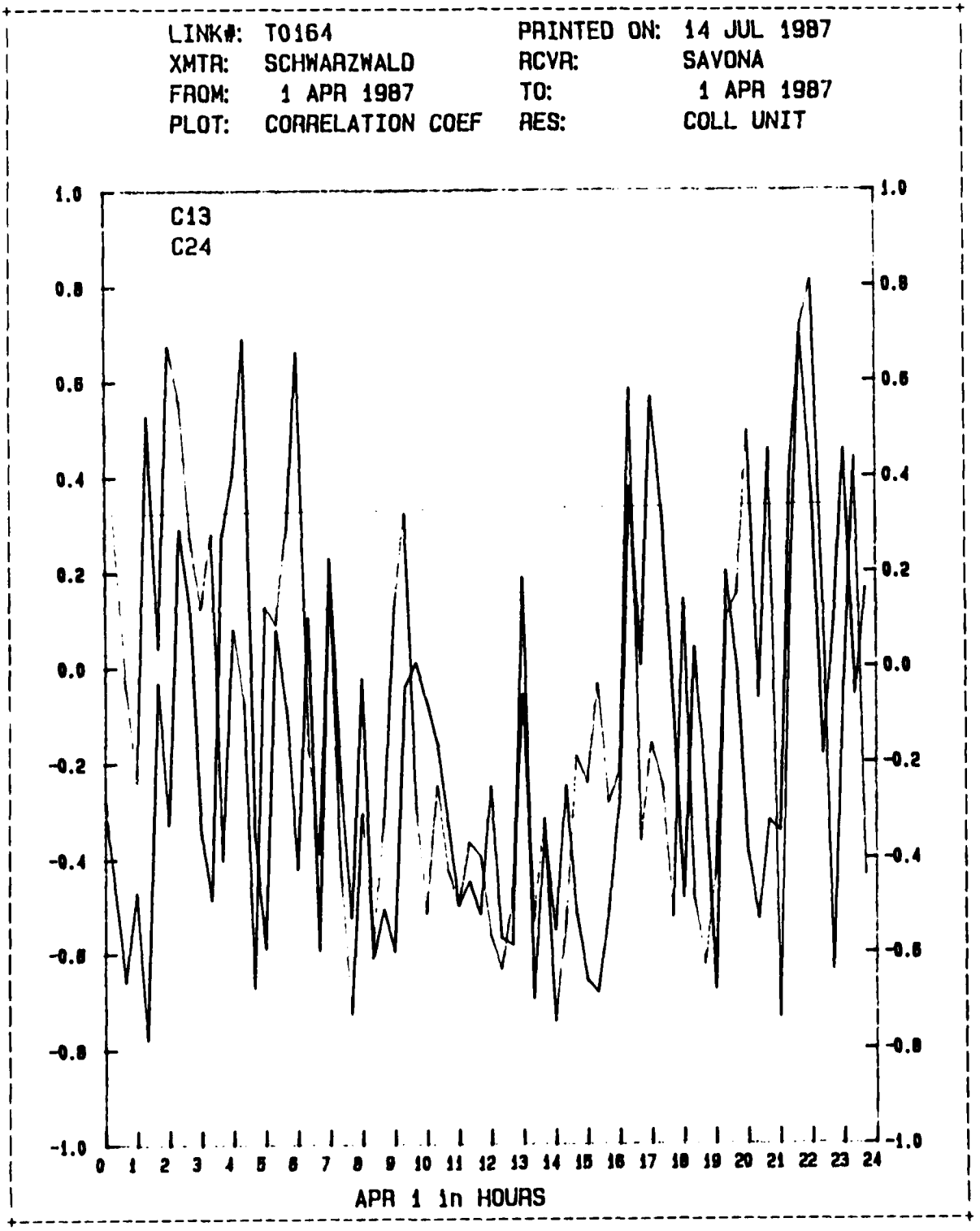
LINK #: T0164
LOCAL (RCVR) SITE: SAVONA
REMTE (XMTR) SITE: SCHWARZWALD
PERIOD: 10 JUL 1986 ------> 17 MAY 1987

| day | JUL 1986 | AUG 1986 | SEP 1986 | OCT 1986 | NOV 1986 | DEC 1986 | JAN 1987 | FEB 1987 | MAR 1987 | APR 1987 | MAY 1987 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | 95 | 95 | 95 | 69 | 94 | 95 | 95 | 71 | 71 | 71 |
| 2 | | 95 | 95 | 96 | 71 | 95 | 95 | 95 | 71 | 71 | 71 |
| 3 | | 95 | 96 | 96 | 71 | 95 | 88 | 95 | 71 | 71 | 71 |
| 4 | | 96 | 96 | 95 | 71 | 95 | 63 | 95 | 71 | 71 | 71 |
| 5 | | 96 | 95 | 96 | 71 | 95 | 95 | 95 | 71 | 71 | 71 |
| 6 | | 95 | 96 | 96 | 63 | 95 | 95 | 95 | 71 | 71 | 71 |
| 7 | | 96 | 96 | 95 | 94 | 95 | 95 | 95 | 71 | 71 | 71 |
| 8 | | 96 | 95 | 96 | 95 | 95 | 95 | 95 | 71 | 71 | 71 |
| 9 | | 95 | 96 | 96 | 95 | 95 | 95 | 95 | 71 | 71 | 71 |
| 10 | 56 | 96 | 96 | 95 | 95 | 95 | 95 | 95 | 71 | 71 | 71 |
| 11 | 96 | 96 | 95 | 96 | 95 | 95 | 95 | 95 | 71 | 71 | 71 |
| 12 | 96 | 95 | 96 | 96 | 95 | 95 | 95 | 95 | 71 | 71 | 71 |
| 13 | 95 | 96 | 96 | 95 | 95 | 95 | 95 | 95 | 71 | 71 | 69 |
| 14 | 96 | 96 | 95 | 96 | 95 | 95 | 95 | 95 | 71 | 71 | 71 |
| 15 | 96 | 95 | 96 | 96 | 95 | 95 | 95 | 95 | 71 | 71 | 71 |
| 16 | 95 | 96 | 96 | 95 | 95 | 95 | 95 | 95 | 71 | 71 | 71 |
| 17 | 95 | 96 | 95 | 96 | 95 | 95 | 95 | 95 | 71 | 71 | 71 |
| 18 | 96 | 95 | 96 | 96 | 95 | 95 | 95 | 95 | 71 | 71 | |
| 19 | 96 | 96 | 96 | 95 | 95 | 94 | 81 | 21 | 71 | 9 | |
| 20 | 95 | 96 | 95 | 96 | 94 | 95 | 95 | 71 | 35 | 72 | |
| 21 | 96 | 95 | 96 | 92 | 95 | 95 | 95 | 71 | 71 | 71 | |
| 22 | 96 | 96 | 96 | 71 | 95 | 94 | 95 | 71 | 71 | 71 | |
| 23 | 95 | 97 | 95 | 71 | 95 | 95 | 95 | 71 | 71 | 71 | |
| 24 | 96 | 95 | 96 | 71 | 95 | 95 | 95 | 71 | 71 | 71 | |
| 25 | 94 | 95 | 96 | 71 | 95 | 95 | 95 | 71 | 71 | 71 | |
| 26 | 95 | 95 | 96 | 71 | 95 | 95 | 95 | 71 | 71 | 71 | |
| 27 | 95 | 95 | 96 | 71 | 95 | 95 | 95 | 71 | 71 | 71 | |
| 28 | 94 | 95 | 95 | 71 | 95 | 95 | 71 | 71 | 71 | 71 | |
| 29 | 95 | 95 | 96 | 71 | 95 | 95 | 95 | --- | 71 | 71 | |
| 30 | 95 | 95 | 96 | 71 | 95 | 95 | 95 | --- | 71 | 71 | |
| 31 | 95 | 95 | --- | 71 | --- | 95 | 95 | --- | 71 | --- | |

CORRELATION COEFFICIENT PLOT

The following is a plot of the received channel correlation coefficients. The plot is available for any day, month, or season of the Summary Database. The collection unit (CU) is the only data point resolution unit available.

The correlation coefficients are identified by a letter followed by two digits. The letter describes the relationship of the paths from the two transmitters to the received channels as follows: "P" means the paths are parallel; "X" means the paths cross; "C" means the paths converge; "D" means the paths diverge. The digits identify the two received channels being correlated.


LINK#: T0164
XMTR: SCHWARZWALD
FROM: 1 APR 1987
PLOT: CORRELATION COEF
PRINTED ON: 14 JUL 1987
RCVR: SAVONA
TO: 1 APR 1987
RES: COLL UNIT
C13
C24
1.0
0.8
0.6
0.4
0.2
0.0
-0.2
-0.4
-0.6
-0.8
-1.0
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
APR 1 in HOURS

CORRELATION COEFFICIENT REPORT

The received channel correlation coefficients report is available for any day, month, or season of the Summary Database. The CU is the only data point resolution unit available. Each page contains statistics for as many as 40 collection cycles. Each line contains the time the collection cycle began, followed by the selected correlation coefficients. Each day of data in the report is printed on a new page.

The correlation coefficients are identified by a letter followed by two digits. The letter describes the relationship of the paths from the two transmitters to the received channels as follows: "P" means the paths are parallel, "X" means the paths cross, "C" means the paths converge, "D" means the paths diverge. The digits identify the two received channels being correlated.

# Correlation Coefficient Report

DEB Link : T0164
Receive Site : SAVONA

Date of data : 1 APR 1987 Transmit Site : SCHWARZWALD

| TIME | D12 | X23 | C13 | C24 | Z14 | D34 |
|---|---|---|---|---|---|---|
| 00:00 | 0.30 | -0.14 | -0.28 | 0.53 | -0.33 | 0.16 |
| 00:40 | -0.15 | -0.53 | -0.66 | -0.04 | 0.15 | 0.19 |
| 01:00 | -0.37 | -0.34 | -0.47 | -0.24 | 0.11 | 0.35 |
| 01:20 | -0.78 | -0.57 | -0.78 | 0.53 | 0.78 | 0.64 |
| 01:40 | 0.25 | -0.30 | -0.03 | 0.04 | 0.27 | 0.36 |
| 02:00 | -0.32 | -0.33 | -0.33 | 0.68 | 0.32 | 0.47 |
| 02:20 | 0.07 | -0.00 | 0.29 | 0.56 | -0.02 | -0.04 |
| 02:40 | 0.55 | -0.19 | 0.12 | 0.27 | 0.26 | 0.17 |
| 03:00 | 0.37 | 0.40 | -0.35 | 0.12 | -0.23 | -0.78 |
| 03:20 | -0.32 | -0.31 | -0.49 | 0.28 | 0.16 | 0.32 |
| 03:40 | 0.20 | 0.17 | 0.28 | -0.40 | 0.21 | 0.01 |
| 04:00 | -0.11 | -0.12 | 0.40 | 0.08 | -0.41 | -0.56 |
| 04:20 | 0.39 | -0.51 | 0.69 | -0.07 | 0.25 | -0.44 |
| 04:40 | 0.74 | -0.66 | -0.34 | -0.67 | -0.37 | 0.11 |
| 05:00 | -0.06 | -0.41 | -0.59 | 0.13 | 0.05 | 0.61 |
| 05:20 | 0.64 | -0.21 | 0.08 | 0.09 | 0.16 | -0.05 |
| 05:40 | 0.22 | -0.13 | -0.09 | 0.29 | -0.30 | 0.10 |
| 06:00 | 0.60 | 0.71 | -0.42 | 0.66 | -0.44 | -0.45 |
| 06:20 | 0.39 | 0.02 | 0.11 | -0.17 | -0.50 | 0.20 |
| 06:40 | -0.01 | 0.09 | -0.59 | -0.39 | 0.49 | -0.50 |
| 07:00 | 0.07 | -0.14 | 0.23 | 0.18 | 0.41 | 0.36 |
| 07:20 | 0.32 | -0.14 | -0.24 | -0.43 | -0.06 | 0.60 |
| 07:40 | 0.52 | -0.51 | -0.52 | -0.73 | -0.57 | 0.56 |
| 08:00 | 0.39 | 0.26 | -0.02 | -0.30 | -0.28 | 0.27 |
| 08:20 | 0.44 | -0.19 | -0.61 | -0.58 | -0.32 | 0.42 |
| 08:40 | 0.51 | -0.23 | -0.51 | -0.33 | -0.69 | 0.33 |
| 09:00 | 0.35 | -0.37 | -0.60 | 0.11 | -0.00 | 0.75 |
| 09:20 | -0.09 | -0.37 | -0.04 | 0.32 | -0.13 | 0.31 |
| 09:40 | -0.13 | 0.14 | 0.01 | -0.29 | -0.40 | 0.55 |
| 10:00 | -0.15 | -0.20 | -0.07 | -0.52 | -0.20 | 0.69 |
| 10:20 | 0.57 | -0.36 | -0.16 | -0.25 | 0.15 | 0.65 |
| 10:40 | 0.40 | -0.20 | -0.33 | -0.43 | -0.54 | 0.72 |
| 11:00 | 0.62 | -0.55 | -0.50 | -0.50 | -0.44 | 0.79 |
| 11:20 | 0.30 | -0.50 | -0.45 | -0.37 | -0.51 | 0.86 |
| 11:40 | 0.26 | -0.36 | -0.52 | -0.39 | -0.34 | 0.54 |
| 12:00 | 0.64 | -0.27 | -0.25 | -0.57 | -0.37 | 0.70 |
| 12:20 | 0.62 | -0.72 | -0.57 | -0.63 | -0.35 | 0.73 |
| 12:40 | 0.51 | -0.59 | -0.58 | -0.49 | -0.46 | 0.85 |
| 13:00 | -0.19 | 0.23 | 0.19 | -0.06 | -0.02 | 0.40 |
| 13:20 | 0.54 | -0.61 | -0.70 | -0.53 | -0.43 | 0.78 |

DEEP FADE REPORT

The following is a printout of the duration, standard deviation, and rate, measured in seconds, of the received signal below a signal power level threshold set in the DCS. The threshold is recorded in the Summary Tape Header file, located in the Test Parameter subsection.

Deep Fade data is printed on a collection unit basis, for up to four received channels. The report is available for any day, month, or season of the Summary Database. Each page contains statistics for as many as 40 collection cycles. Each line contains the time the collection cycle began, followed by the duration, standard deviation, and rate for each channel selected. Each day of data in the report is printed on a new page.

Notice in the example provided that the duration is often equal to 900 seconds, which is the length of the collection cycle. This means the signal power level was below the threshold for the entire collection cycle. Also, notice that "^^^^" means that the standard deviation is greater than or equal to 1000 seconds.

# Deep Fade Report

DEB Link : T0164
Receive Site : SAVONA Transmit Site : SCHWARZWALD

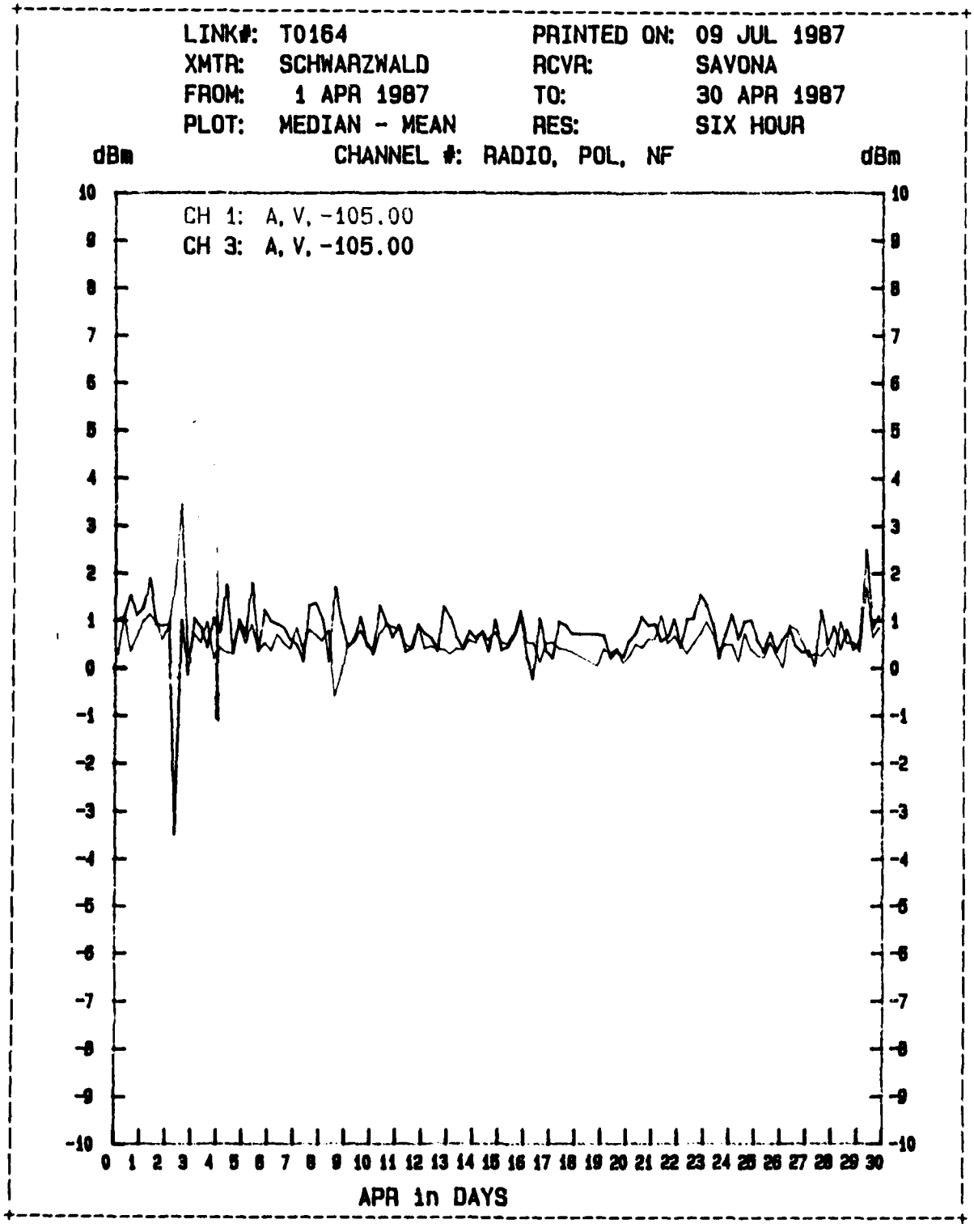
Date of data : 1 APR 1987

| | Channel 1 | | | Channel 2 | | | Channel 3 | | | Channel 4 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TIME | OUR sec | STDEV sec | RATE sec | OUR sec | STDEV sec | RATE sec | OUR sec | STDEV sec | RATE sec | OUR sec | STDEV sec | RATE sec |
| 00:00 | 0.52 | 152 | 1.80 | 900 | 0.00 | 0.00 | 0.51 | 452 | 1.45 | 900 | 0.00 | 0.00 |
| 00:40 | 900 | 0.00 | 0.00 | 50.0 | **** | 0.02 | 0.00 | 0.00 | 0.00 | 900 | 0.00 | 0.00 |
| 01:00 | 900 | 0.00 | 0.00 | 900 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 900 | 0.00 | 0.00 |
| 01:20 | 45.0 | **** | 0.02 | 300 | **** | 0.00 | 0.22 | 255 | 2.04 | 900 | 0.00 | 0.00 |
| 01:40 | 900 | 0.00 | 0.00 | 900 | 0.00 | 0.00 | 0.15 | 67.4 | 1.10 | 900 | 0.00 | 0.00 |
| 02:00 | 900 | 0.00 | 0.00 | 900 | 0.00 | 0.00 | 0.15 | 86.9 | 2.05 | 900 | 0.00 | 0.00 |
| 02:20 | 900 | 0.00 | 0.00 | 64.3 | **** | 0.02 | 1.17 | 810 | 0.77 | 900 | 0.00 | 0.00 |
| 02:40 | 25.7 | **** | 0.04 | 2.52 | **** | 0.39 | 0.15 | 67.2 | 2.67 | 900 | 0.00 | 0.00 |
| 03:00 | 900 | 0.00 | 0.00 | 900 | 0.00 | 0.00 | 0.46 | 614 | 1.00 | 900 | 0.00 | 0.00 |
| 03:20 | 900 | 0.00 | 0.00 | 900 | 0.00 | 0.00 | 0.10 | 30.9 | 1.08 | 900 | 0.00 | 0.00 |
| 03:40 | 900 | 0.00 | 0.00 | 0.03 | 1.85 | 4.61 | 0.42 | 383 | 1.24 | 900 | 0.00 | 0.00 |
| 04:00 | 3.56 | **** | 0.28 | 0.05 | 7.42 | 2.12 | 0.58 | 328 | 0.30 | 180 | **** | 0.01 |
| 04:20 | 60.2 | **** | 0.01 | 0.06 | 58.2 | 5.91 | 0.31 | 277 | 0.81 | 900 | 0.00 | 0.00 |
| 04:40 | 900 | 0.00 | 0.00 | 900 | 0.00 | 0.00 | 0.85 | 643 | 0.58 | 900 | 0.00 | 0.00 |
| 05:00 | 300 | **** | 0.00 | 0.85 | 410 | 1.13 | 0.27 | 120 | 1.18 | 900 | 0.00 | 0.00 |
| 05:20 | 3.49 | **** | 0.28 | 56.2 | **** | 0.02 | 0.20 | 119 | 1.02 | 900 | 0.00 | 0.00 |
| 05:40 | 2.72 | **** | 0.36 | 2.88 | **** | 0.34 | 0.25 | 152 | 0.85 | 300 | **** | 0.00 |
| 06:00 | 1.52 | **** | 0.64 | 300 | **** | 0.00 | 0.15 | 59.2 | 1.36 | 300 | **** | 0.00 |
| 06:20 | 1.09 | **** | 0.74 | 0.32 | 275 | 2.14 | 0.35 | 158 | 0.91 | 300 | **** | 0.00 |
| 06:40 | 56.2 | **** | 0.02 | 31.0 | **** | 0.03 | 0.00 | 0.00 | 0.00 | 900 | 0.00 | 0.00 |
| 07:00 | 9.45 | **** | 0.11 | 900 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 900 | 0.00 | 0.00 |
| 07:20 | 1.06 | 758 | 0.91 | 0.07 | 72.7 | 5.80 | 0.45 | 183 | 0.98 | 900 | 0.00 | 0.00 |
| 07:40 | 1.00 | **** | 0.84 | 0.37 | 381 | 2.23 | 0.45 | 212 | 0.77 | 900 | 0.00 | 0.00 |
| 08:00 | 0.84 | 408 | 1.14 | 0.32 | 300 | 1.73 | 0.28 | 144 | 0.52 | 900 | 0.00 | 0.00 |
| 08:20 | 0.63 | 490 | 1.33 | 0.51 | 786 | 1.59 | 0.36 | 184 | 1.00 | 1.49 | **** | 0.65 |
| 08:40 | 7.47 | **** | 0.13 | 900 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 900 | 0.00 | 0.00 |
| 09:00 | 3.20 | **** | 0.31 | 0.62 | 631 | 1.47 | 0.08 | 17.1 | 0.67 | 450 | **** | 0.00 |
| 09:20 | 0.14 | 116 | 3.34 | 0.31 | 382 | 2.33 | 0.40 | 317 | 1.27 | 300 | **** | 0.00 |
| 09:40 | 450 | **** | 0.00 | 1.62 | **** | 0.59 | 0.00 | 0.00 | 0.00 | 900 | 0.00 | 0.00 |
| 10:00 | 180 | **** | 0.01 | 0.59 | 442 | 1.25 | 0.23 | 123 | 0.77 | 900 | 0.00 | 0.00 |
| 10:20 | 2.09 | **** | 0.47 | 0.24 | 171 | 2.25 | 0.42 | 217 | 0.33 | 900 | 0.00 | 0.00 |
| 10:40 | 900 | 0.00 | 0.00 | 0.70 | 467 | 1.28 | 0.22 | 110 | 1.37 | 900 | 0.00 | 0.00 |
| 11:00 | 1.28 | 794 | 0.75 | 0.39 | 335 | 2.20 | 0.58 | 193 | 0.42 | 900 | 0.00 | 0.00 |
| 11:20 | 6.17 | **** | 0.16 | 0.45 | 212 | 1.64 | 0.44 | 208 | 0.94 | 900 | 0.00 | 0.00 |
| 11:40 | 900 | 0.00 | 0.00 | 0.06 | 22.1 | 3.52 | 0.47 | 197 | 1.04 | 900 | 0.00 | 0.00 |
| 12:00 | 8.31 | **** | 0.12 | 0.12 | 125 | 2.77 | 0.56 | 277 | 1.09 | 900 | 0.00 | 0.00 |
| 12:20 | 900 | 0.00 | 0.00 | 0.32 | 413 | 2.29 | 0.95 | 557 | 0.38 | 900 | 0.00 | 0.00 |
| 12:40 | 3.25 | **** | 0.31 | 0.52 | 618 | 1.34 | 1.46 | 360 | 0.04 | 900 | 0.00 | 0.00 |
| 13:00 | 900 | 0.00 | 0.00 | 0.95 | **** | 1.00 | 0.00 | 0.00 | 0.00 | 900 | 0.00 | 0.00 |
| 13:20 | 50.0 | **** | 0.02 | 2.14 | **** | 0.43 | 0.18 | 45.7 | 0.65 | 900 | 0.00 | 0.00 |

DELTA (MEDIAN RSL - MEAN RSL) PLOT

The following is a plot of the difference between the median and mean RSL for up to four received channels. The plot is available for any day, month, or season of the Summary Database. Data points (resolution units) can be plotted as follows: for each collection cycle, each hour, every six hours, every twelve hours, every day, or every month.

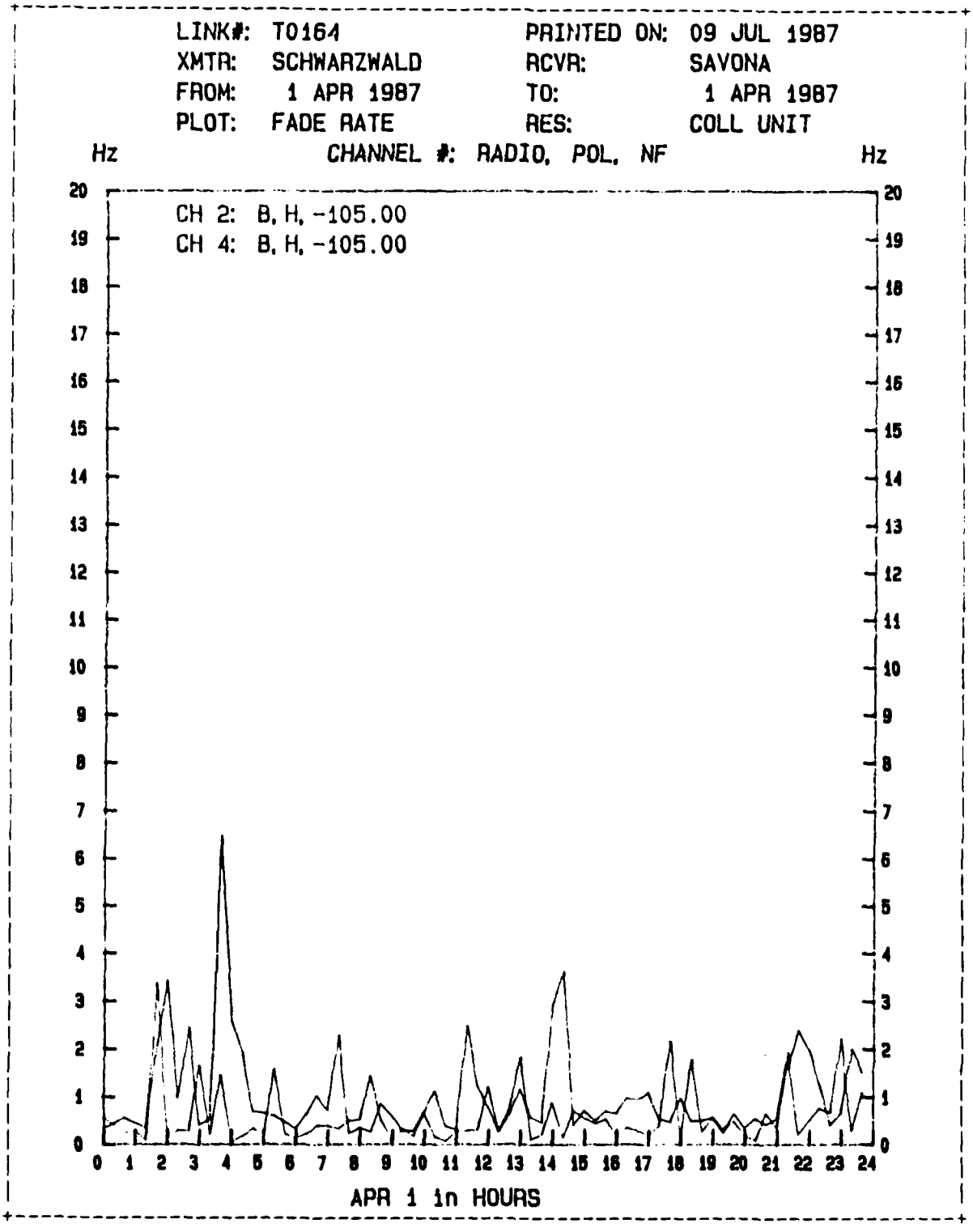
The plot header appears at the top of the page and consists of the following: the DEB link number, the name of the transmit and receive sites, the starting and ending dates of the plot, the statistical parameter being plotted, the data point resolution, and the date the plot was generated. Within the plot axes, at the top, each channel number appears in color, followed by the radio identifier (A or B), the polarization ("V" means vertical, and "H" means horizontal), and the noisefloor measured in dBm.


LINK#: T0164
PRINTED ON: 09 JUL 1987
XMTR: SCHWARZWALD
RCVR: SAVONA
FROM: 1 APR 1987
TO: 30 APR 1987
PLOT: MEDIAN - MEAN
RES: SIX HOUR
dBm
CHANNEL #: RADIO, POL, NF
dBm
CH 1: A, V, -105.00
CH 3: A, V, -105.00
10 9 8 7 6 5 4 3 2 1 0 -1 -2 -3 -4 -5 -6 -7 -8 -9 -10
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
APR in DAYS

FADE RATE PLOT

The following is a plot of the fade rate for up to four received channels. The fade rate can be interpreted as the number of times per second the signal power level crosses the median RSL (in one direction), measured in median crossings per second. The plot is available for any day, month, or season of the Summary Database. Data points (resolution units) can be plotted only on a collection cycle basis. The example shown plots the fade rate for a day.

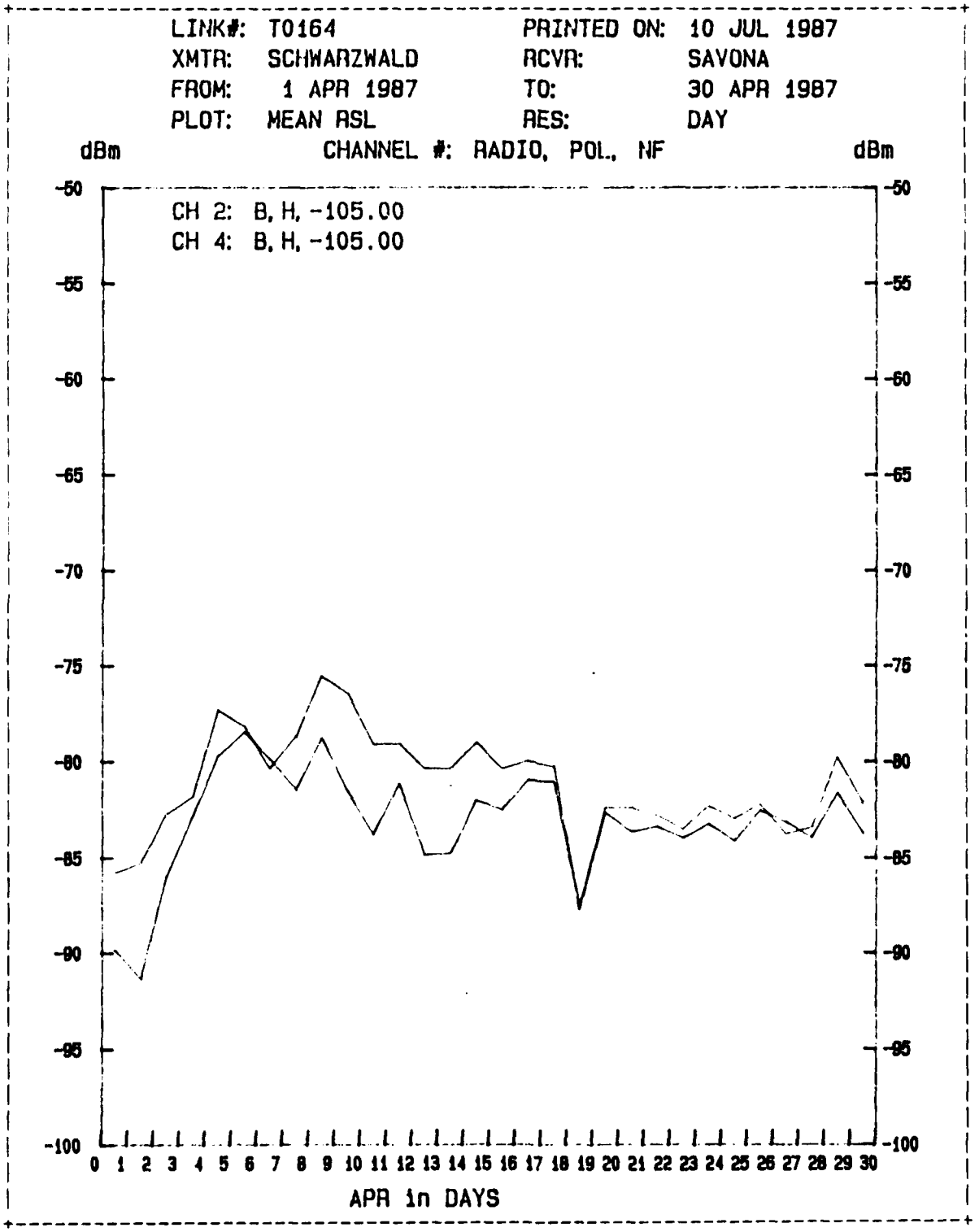
The plot header appears at the top of the page, and consists of the following: the DEB link number, the name of the transmit and receive sites, the starting and ending dates of the plot, the statistical parameter being plotted, the data point resolution, and the date the plot was generated. Within the plot axes, at the top, each channel number appears in color, followed by the radio identifier (A or B), the polarization ("V" means vertical, and "H" means horizontal), and the noisefloor measured in dBm.


LINK#: T0164
PRINTED ON: 09 JUL 1987
XMTR: SCHWARZWALD
RCVR: SAVONA
FROM: 1 APR 1987
TO: 1 APR 1987
PLOT: FADE RATE
RES: COLL UNIT
Hz
CHANNEL #: RADIO, POL, NF
Hz
CH 2: B, H, -105.00
CH 4: B, H, -105.00
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
APR 1 in HOURS

MEAN RSL PLOT

The following is a plot of the mean RSL for up to four received channels. The plot is available for any day, month, or season of the Summary Database. Data points (resolution units) can be computed as follows: for each collection cycle, hour, six hours, twelve hours, day, or month. The example shown plots the mean RSL for one month with data points for each day.

The plot header appears at the top of the page and consists of the following: the DEB link number, the name of the transmit and receive sites, the starting and ending dates of the plot, the statistical parameter being plotted, the data point resolution, and the date the plot was generated. Within the plot axes, at the top, each channel number appears in color, followed by the radio identifier (A or B), the polarization ("V" means vertical, and "H" means horizontal), and the noisefloor measured in dBm.


LINK#: T0164
PRINTED ON: 10 JUL 1987
XMTR: SCHWARZWALD
RCVR: SAVONA
FROM: 1 APR 1987
TO: 30 APR 1987
PLOT: MEAN RSL
RES: DAY
dBm
CHANNEL #: RADIO, POL., NF
dBm
CH 2: B, H, -105.00
CH 4: B, H, -105.00
-50
-55
-60
-65
-70
-75
-80
-85
-90
-95
-100
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
APR in DAYS

MEAN RSL REPORT

The following is a printout of the mean RSL and standard deviation, on a collection unit basis, for up to four received channels. The report is available for any day, month, or season of the Summary Database. Each page contains statistics for as many as 40 collection cycles. Each line contains the time the collection cycle began, followed by the mean and standard deviation for each channel selected. Each day of data in the report is printed on a new page.

# Mean RSL Report

DEB Link : T0164
Receive Site : SAVONA Transmit Site : SCHWARZWALD

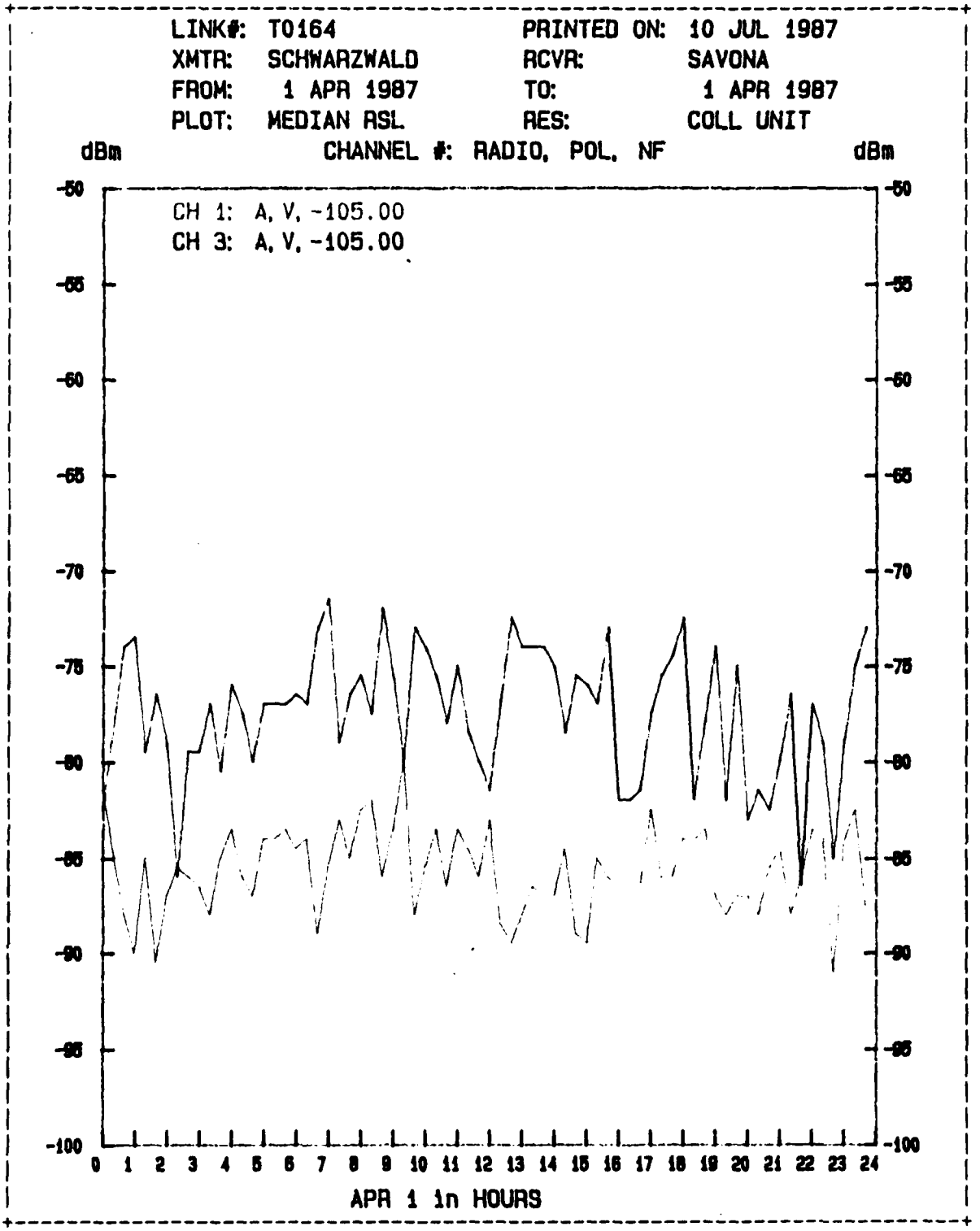
Date of data : 1 APR 1987

| | Channel 1 | | Channel 2 | | Channel 3 | | Channel 4 | |
|---|---|---|---|---|---|---|---|---|
| TIME | MEAN dBm | STDEC dB | MEAN dBm | STDEC dB | MEAN dBm | STDEV dB | MEAN dBm | STDEV dB |
| 00:00 | -81.6 | -.94 | -88.6 | 4.11 | -84.8 | 5.97 | -94.9 | 3.25 |
| 00:40 | -89.4 | 4.66 | -84.9 | 2.18 | -74.0 | 1.29 | -87.6 | 1.70 |
| 01:00 | -89.8 | 4.79 | -90.6 | 5.36 | -73.6 | 1.29 | -85.1 | 1.31 |
| 01:20 | -85.4 | 2.67 | -86.3 | 2.70 | -80.4 | 4.09 | -92.1 | 6.00 |
| 01:40 | -90.9 | 2.23 | -86.5 | 1.91 | -77.0 | 2.61 | -84.7 | 0.83 |
| 02:00 | -86.9 | 1.44 | -88.0 | 2.22 | -78.7 | 2.81 | -92.0 | 6.95 |
| 02:20 | -85.4 | 1.58 | -89.4 | 3.51 | -86.0 | 4.52 | -97.7 | 6.86 |
| 02:40 | -85.7 | 2.09 | -84.4 | 1.95 | -79.3 | 2.49 | -87.8 | 1.84 |
| 03:00 | -86.7 | 1.92 | -86.6 | 3.40 | -82.4 | 6.12 | -90.6 | 2.30 |
| 03:20 | -89.1 | 3.30 | -95.1 | 6.70 | -77.2 | 2.26 | -95.9 | 5.38 |
| 03:40 | -85.0 | 1.61 | -78.8 | 1.32 | -80.4 | 4.18 | -87.8 | 1.58 |
| 04:00 | -83.9 | 1.93 | -78.2 | 1.51 | -77.3 | 4.41 | -91.1 | 6.45 |
| 04:20 | -85.9 | 2.18 | -79.9 | 1.85 | -78.4 | 3.94 | -93.8 | 7.37 |
| 04:40 | -88.2 | 3.70 | -89.1 | 5.93 | -80.4 | 5.78 | -97.3 | 5.43 |
| 05:00 | -85.0 | 2.98 | -83.9 | 4.05 | -77.8 | 5.01 | -90.1 | 5.70 |
| 05:20 | -84.1 | 1.86 | -88.2 | 6.04 | -77.8 | 3.97 | -91.7 | 3.51 |
| 05:40 | -83.3 | 1.52 | -87.0 | 4.30 | -77.7 | 3.41 | -86.6 | 2.14 |
| 06:00 | -85.4 | 3.80 | -91.0 | 7.17 | -77.1 | 3.29 | -88.2 | 4.52 |
| 06:20 | -83.6 | 3.22 | -84.4 | 7.34 | -78.5 | 4.34 | -88.0 | 4.99 |
| 06:40 | -89.7 | 5.73 | -87.4 | 3.17 | -73.1 | 1.99 | -89.3 | 4.56 |
| 07:00 | -85.9 | 3.40 | -90.7 | 4.35 | -71.4 | 1.43 | -85.1 | 1.30 |
| 07:20 | -82.9 | 1.55 | -80.4 | 2.63 | -79.5 | 4.65 | -95.4 | 6.23 |
| 07:40 | -84.6 | 3.63 | -84.0 | 4.39 | -77.3 | 5.22 | -90.8 | 3.59 |
| 08:00 | -83.0 | 2.68 | -81.7 | 4.80 | -76.3 | 4.78 | -92.3 | 7.10 |
| 08:20 | -82.1 | 2.45 | -87.8 | 7.34 | -78.4 | 4.81 | -86.7 | 3.39 |
| 08:40 | -87.3 | 4.73 | -91.1 | 5.92 | -72.0 | 1.09 | -85.1 | 1.27 |
| 09:00 | -84.2 | 2.86 | -85.3 | 3.65 | -76.1 | 2.07 | -86.9 | 2.85 |
| 09:20 | -80.3 | 1.96 | -82.7 | 3.21 | -80.2 | 4.54 | -86.2 | 2.16 |
| 09:40 | -88.3 | 3.19 | -87.3 | 6.45 | -72.9 | 1.61 | -88.0 | 2.37 |
| 10:00 | -86.0 | 2.53 | -84.2 | 6.20 | -75.2 | 4.24 | -89.4 | 4.24 |
| 10:20 | -84.0 | 2.49 | -80.8 | 3.15 | -76.2 | 5.15 | -90.2 | 5.57 |
| 10:40 | -87.3 | 3.75 | -84.2 | 3.42 | -77.8 | 4.56 | -94.4 | 7.19 |
| 11:00 | -84.3 | 3.12 | -82.9 | 2.76 | -76.6 | 4.77 | -89.8 | 5.26 |
| 11:20 | -85.9 | 4.13 | -81.8 | 2.88 | -79.9 | 5.18 | -92.3 | 5.40 |
| 11:40 | -86.5 | 3.04 | -79.0 | 1.64 | -80.1 | 3.33 | -92.4 | 3.79 |
| 12:00 | -83.7 | 1.80 | -79.7 | 2.55 | -80.9 | 4.52 | -94.5 | 4.48 |
| 12:20 | -88.1 | 3.11 | -85.1 | 6.40 | -79.6 | 5.94 | -91.8 | 4.33 |
| 14:40 | -89.1 | 4.72 | -84.5 | 5.63 | -73.3 | 3.18 | -89.2 | 2.83 |
| 13:00 | -89.1 | 3.58 | -88.6 | 4.93 | -74.5 | 1.44 | -91.7 | 2.04 |
| 13:20 | -86.7 | 3.41 | -86.1 | 3.52 | -75.1 | 3.07 | -91.9 | 3.75 |

MEDIAN RSL PLOT

The following is a plot of the median RSL for up to four received channels. The plot is available for any day, month, or season of the Summary Database. Data points, or resolution units, can be computed as follows: for each collection cycle, hour, six hours, twelve hours, day, or month. The example shown plots the median RSL for one day with data points for each collection cycle.

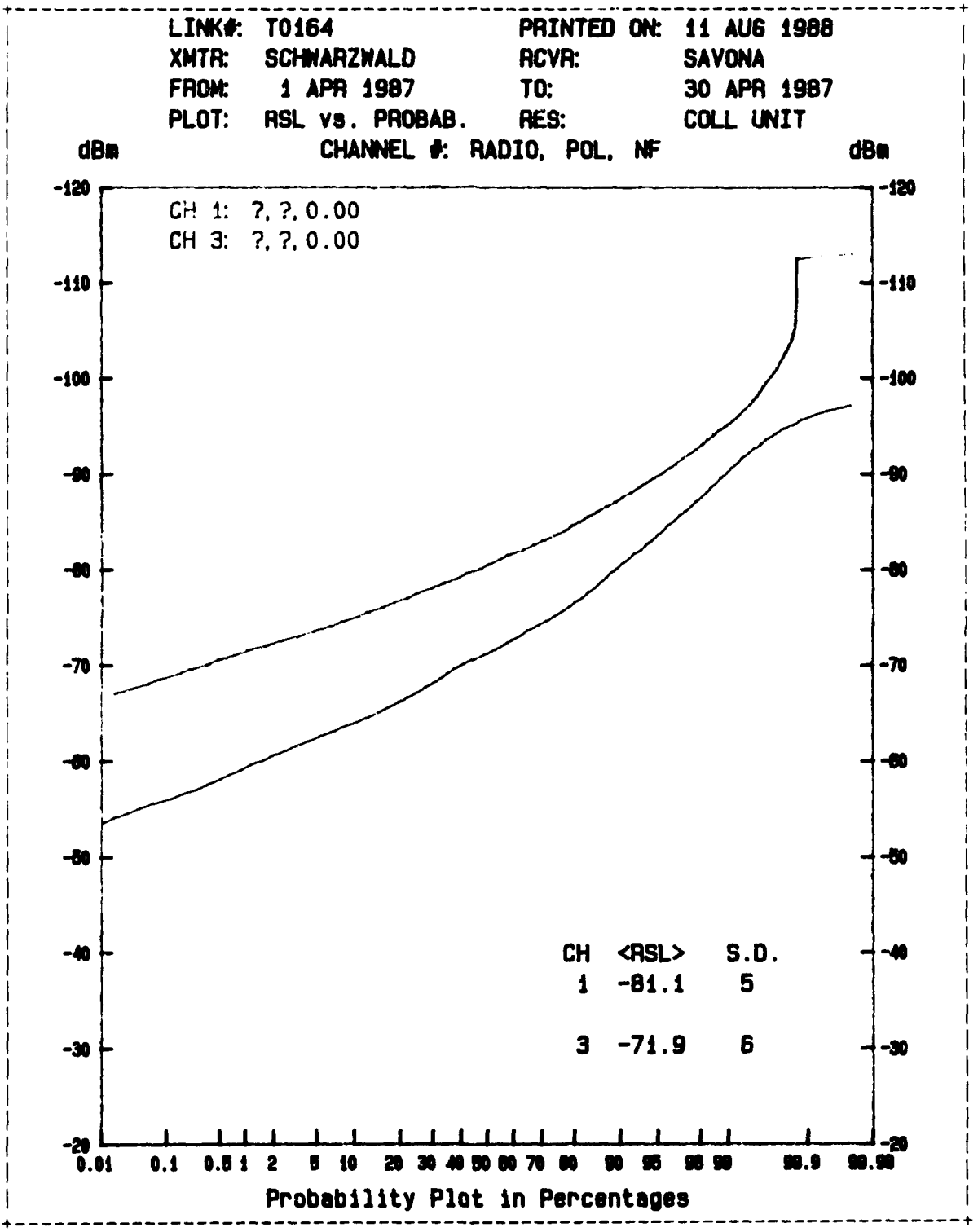
The plot header appears at the top of the page and consists of the following: the DEB link number, the name of the transmit and receive sites, the starting and ending dates of the plot, the statistical parameter being plotted, the data point resolution, and the date the plot was generated. Within the plot axes, at the top, each channel number appears in color, followed by the radio identifier (A or B), the polarization ("V" means vertical, and "H" means horizontal), and the noisefloor measured in dBm.


LINK#: T0164
PRINTED ON: 10 JUL 1987
XMTR: SCHWARZWALD
RCVR: SAVONA
FROM: 1 APR 1987
TO: 1 APR 1987
PLOT: MEDIAN RSL
RES: COLL UNIT
dBm
CHANNEL #: RADIO, POL, NF
dBm
CH 1: A, V, -105.00
CH 3: A, V, -105.00
-50
-55
-60
-65
-70
-75
-80
-85
-90
-95
-100
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
APR 1 in HOURS

RSL PROBABILITY FUNCTION PLOT

The following is a plot of the RSL Probability Function for up to four received channels. It shows what percent of the time the signal power level is above a certain threshold. The plot is available for any day, month, season, or year of the Summary Database. The probability distribution is based on the histogram covering the selected time scale. Therefore, the data point resolution unit does not apply.

The plot header appears at the top of the page and consists of the following: the DEB link number, the name of the transmit and receive sites, the starting and ending dates of the plot, the statistical parameter being plotted, the data point resolution, and the date the plot was generated. Within the plot axes, at the top, each channel number appears in color, followed by the radio identifier (A or B), the polarization ("V" means vertical, and "H" means horizontal), and the noisefloor measured in dBm.


LINK#: T0164
PRINTED ON: 11 AUG 1988
XMTR: SCHWARZWALD
RCVR: SAVONA
FROM: 1 APR 1987
TO: 30 APR 1987
PLOT: RSL vs. PROBAB.
RES: COLL UNIT
dBm
CHANNEL #: RADIO, POL, NF
dBm
CH 1: ?, ?, 0.00
CH 3: ?, ?, 0.00
-120
-110
-100
-90
-80
-70
-60
-50
-40
-30
-20
CH <RSL> S.D.
1 -81.1 5
3 -71.9 6
0.01 0.1 0.5 1 2 5 10 20 30 40 50 60 70 80 90 95 98 99 99.9 99.99
Probability Plot in Percentages

RSL PROBABILITY FUNCTION REPORT

The following is a printout of the RSL Probability Function for up to four received channels. The report is available for any time period in the Summary Database. The complete range of RSL values, 0 to -120.0 dBm in 0.5 dBm increments, is printed each time.

# Probability RSL Report

DEB Link : T0164
Receive Site : SAVONA Transmit Site : SCHWARZWALD

Date of data : 1 APR 1987 ---> 30 APR 1987

Probability in Percent

| dBm | Channel 1 | Channel 2 | Channel 3 | Channel 4 |
|---|---|---|---|---|
| -60.5 | 0.00 | 0.00 | 1.92 | 0.00 |
| -61.0 | 0.00 | 0.00 | 2.64 | 0.00 |
| -61.5 | 0.00 | 0.00 | 3.30 | 0.00 |
| -62.0 | 0.00 | 0.00 | 4.29 | 0.00 |
| -62.5 | 0.00 | 0.00 | 5.44 | 0.00 |
| -63.0 | 0.00 | 0.01 | 6.89 | 0.00 |
| -63.5 | 0.00 | 0.01 | 8.33 | 0.01 |
| -64.0 | 0.00 | 0.02 | 10.57 | 0.01 |
| -64.5 | 0.00 | 0.03 | 12.59 | 0.02 |
| -65.0 | 0.00 | 0.05 | 14.85 | 0.04 |
| -65.5 | 0.01 | 0.08 | 17.18 | 0.05 |
| -66.0 | 0.00 | 0.12 | 19.68 | 0.08 |
| -66.5 | 0.00 | 0.17 | 22.11 | 0.11 |
| -67.0 | 0.02 | 0.27 | 24.80 | 0.15 |
| -67.5 | 0.03 | 0.37 | 27.25 | 0.20 |
| -68.0 | 0.05 | 0.59 | 30.12 | 0.27 |
| -68.5 | 0.08 | 0.82 | 32.52 | 0.36 |
| -69.0 | 0.14 | 1.28 | 34.98 | 0.47 |
| -69.5 | 0.21 | 1.74 | 37.57 | 0.61 |
| -70.0 | 0.35 | 2.44 | 40.99 | 0.84 |
| -70.5 | 0.49 | 3.08 | 44.76 | 1.13 |
| -71.0 | 0.74 | 4.21 | 48.59 | 1.57 |
| -71.5 | 1.06 | 5.17 | 52.70 | 1.93 |
| -72.0 | 1.62 | 6.54 | 56.34 | 2.77 |
| -72.5 | 2.36 | 8.44 | 58.91 | 3.67 |
| -73.0 | 3.43 | 10.37 | 62.55 | 4.76 |
| -73.5 | 4.77 | 12.41 | 65.03 | 5.95 |
| -74.0 | 6.54 | 14.78 | 68.59 | 7.41 |
| -74.5 | 8.09 | 17.48 | 71.18 | 9.23 |
| -75.0 | 10.55 | 20.20 | 73.86 | 11.03 |
| -75.5 | 12.44 | 23.10 | 76.21 | 13.24 |
| -76.0 | 15.62 | 26.29 | 78.43 | 15.69 |
| -76.5 | 18.47 | 28.86 | 80.08 | 17.76 |
| -77.0 | 22.09 | 32.27 | 82.09 | 20.62 |
| -77.5 | 25.06 | 34.93 | 83.37 | 23.06 |
| -78.0 | 29.67 | 38.41 | 85.01 | 25.90 |
| -78.5 | 33.24 | 40.83 | 86.06 | 28.15 |
| -79.0 | 38.57 | 43.41 | 87.27 | 30.96 |
| -79.5 | 41.99 | 46.60 | 88.18 | 33.25 |
| -80.0 | 46.78 | 49.29 | 89.31 | 36.33 |

APPENDIX D

SUMMARY DATABASE FORMAT

Index file

| Parameter | Type | Size (Bytes) |
|---|---|---|
| H | Short Integer | 2 |
| L | Short Integer | 2 |
| N | Short Integer | 2 |
| Q | Short Integer | 2 |
| S1 | Short Integer | 2 |
| S2 | Short Integer | 2 |

HEADER File

| Parameter | Type | Size (Bytes) |
|---|---|---|
| DATE | Integer | 4 |
| Units: yyyymmdd | | |
| Range: N/A | | |
| TIME | Integer | 4 |
| Units: hhmmss | | |
| Range: N/A | | |
| LINK_NUMBER | String | 16 |
| Units: ID | | |
| Range: N/A | | |
| LOCAL_SITE | | |
| NAME | String | 16 |
| Units: N/A | | |
| Range: N/A | | |
| ANT_HEIGHT_AG | Real [4] | 32 |
| Units: feet | | |
| Range: < 10,000.0 | | |
| ANT_AREA | Real [4] | 32 |
| Units: square feet | | |
| Range: < 30,000.0 | | |
| ANT_FORM_FACTOR | String [4] | 8 |
| Units: N/A | | |
| Range: N/A | | |
| ANT_GAIN | Real [4] | 32 |
| Units: decibels (dB) | | |
| Range: < 110.0 | | |

| (Parameter | Type | Size (Bytes)) |
|---|---|---|
| POLARIZATION | Character [4] | 4 |
| Units: N/A | | |
| Range: 'V'/'H' | | |
| WAVEGUIDE_LOSS | Real [4] | 32 |
| Units: dB | | |
| Range: < 50.0 | | |
| GAIN_RF_CPLR_OUT | Real [4] | 32 |
| Units: dB | | |
| Range: < 150.0 | | |
| FREQUENCY | Real [4] | 32 |
| Units: gigahertz (GHz) | | |
| Range: < 24.0 | | |
| ASSOCIATED_RADIO | Character [4] | 4 |
| Units: N/A | | |
| Range: 'A'/'B' | | |
| NOISE_BANDWIDTH | Real [4] | 32 |
| Units: megahertz (MHz) | | |
| Range: < 140.0 | | |
| SIGNAL_BANDWIDTH | Real [4] | 32 |
| Units: MHz | | |
| Range: < 140.0 | | |
| FM_THRESHOLD | Real [4] | 32 |
| Units: decibels with respect to milliwatts (dBM) | | |
| Range: < -30.0 | | |
| TYPICAL_RSL | Real [4] | 32 |
| Units: dBM | | |
| Range: < 0.0 | | |
| NOISEFLOOR | Real [4] | 32 |
| Units: dBM | | |
| Range: < -40.0 | | |
| INSTRUMENT_IF_BW | Real [4] | 32 |
| Units: MHz | | |
| Range: < -140.0 | | |
| AD_CHANNEL_ASSIGNMENT | Character [8] | 8 |
| Units: N/A | | |
| Range: 'A'..'Z' | | |
| COUPLER_LOSS | Real [4] | 32 |
| Units: dB | | |
| Range: < 0.0 | | |
| SPARE_PARAM | Real [4] | 32 |
| Units: N/A | | |
| Range: N/A | | |

| (Parameter | Type | Size (Bytes)) |
|---|---|---|
| REMOTE_SITE | | |
| NAME | String | 16 |
| Units: N/A | | |
| Range: N/A | | |
| ANT_HEIGHT_AG | Real [2] | 16 |
| Units: feet | | |
| Range: < 10,000.0 | | |
| ANT_AREA | Real [2] | 16 |
| Units: square feet | | |
| Range: < 30,000.0 | | |
| ANT_FORM_FACTOR | String [2] | 4 |
| Units: N/A | | |
| Range: N/A | | |
| ANT_GAIN | Real [2] | 16 |
| Units: dB | | |
| Range: < 110.0 | | |
| POLARIZATION | Character [2] | 2 |
| Units: N/A | | |
| Range: 'V'/'H' | | |
| WAVEGUIDE_LOSS | Real [2] | 16 |
| Units: dB | | |
| Range: < 50.0 | | |
| XMTR_POWER | Real [2] | 16 |
| Units: watts (w) | | |
| Range: .01..100,000.0 | | |
| COMMENT | | |
| ANT_HEIGHT_AG | Short Integer | 2 |
| Units: N/A | | |
| Range: 1..12,1 | | |

where
1 = Casual Estimate
2 = Intermediate Estimate
3 = Serious Estimate
4 = Documented Measurement, Recent
5 = Documented Measurement, Old
6 = Undocumented Measurement
7 = According to Specification
8 = Known Lower Bound
9 = Known Upper Bound
10 = Default Value
11 = Local Prerogative
12 = Not Applicable

| (Parameter | Type | Size (Bytes)) |
|---|---|---|
| ANT_AREA<br>Units: N/A<br>Range: 1..12,1 | Short Integer | 2 |
| ANT_FORM_FACTOR<br>Units: N/A<br>Range: 1..12,1 | Short Integer | 2 |
| ANT_GAIN<br>Units: N/A<br>Range: 1..12,1 | Short Integer | 2 |
| POLARIZATION<br>Units: N/A<br>Range: 1..12,1 | Short Integer | 2 |
| WAVEGUIDE_LOSS<br>Units: N/A<br>Range: 1..12,1 | Short Integer | 2 |
| XMTR_POWER<br>Units: N/A<br>Range: 1..12,1 | Short Integer | 2 |
| GAIN_RF_CPLR_OUT<br>Units: N/A<br>Range: 1..12,1 | Short Integer | 2 |
| FREQUENCY<br>Units: N/A<br>Range: 1..12,1 | Short Integer | 2 |
| ASSOCIATED_RADIO<br>Units: N/A<br>Range: 1..12,1 | Short Integer | 2 |
| NOISE_BANDWIDTH<br>Units: N/A<br>Range: 1..12,1 | Short Integer | 2 |
| SIGNAL_BANDWIDTH<br>Units: N/A<br>Range: 1..12,1 | Short Integer | 2 |
| FM_THRESHOLD<br>Units: N/A<br>Range: 1..12,1 | Short Integer | 2 |
| TYPICAL_RSL<br>Units: N/A<br>Range: 1..12,1 | Short Integer | 2 |
| NOISEFLOOR<br>Units: N/A<br>Range: 1..12,1 | Short Integer | 2 |
| INSTRUMENT_IF_BW<br>Units: N/A<br>Range: 1..12,1 | Short Integer | 2 |

| (Parameter | Type | Size (Bytes)) |
|---|---|---|
| AD_CHANNEL_ASSIGNMENT | | |
| | Short Integer | 2 |
| Units: N/A | | |
| Range: 1..12,1 | | |
| COUPLER_LOSS | Short Integer | 2 |
| Units: N/A | | |
| Range: 1..12,1 | | |
| SPARE_PARAM | Short Integer | 2 |
| Units: N/A | | |
| Range: 1..12,1 | | |
| TEST_PARAMETERS | | |
| UPPER_THRESHOLD | Real [4] | 32 |
| Units: dBM | | |
| Range: < -28.5 | | |
| LOWER_THRESHOLD | Real [4] | 32 |
| Units: dBM | | |
| Range: < -31.5 | | |
| UPPER_BOUND | Real [4] | 32 |
| Units: dBM | | |
| Range: < -28.5 | | |
| LOWER_BOUND | Real [4] | 32 |
| Units: dBM | | |
| Range: < -31.5 | | |
| SPARE1 | Real [4] | 32 |
| Units: N/A | | |
| Range: N/A | | |
| SPARE2 | Real [4] | 32 |
| Units: N/A | | |
| Range: N/A | | |
| EQUIPMENT | | |
| RCVR | String | 28 |
| Units: N/A | | |
| Range: N/A | | |
| XMTR | String | 28 |
| Units: N/A | | |
| Range: N/A | | |
| COMBINER | String | 28 |
| Units: N/A | | |
| Range: N/A | | |
| PREAMP | String | 28 |
| Units: N/A | | |
| Range: N/A | | |
| HPA | String | 28 |
| Units: N/A | | |
| Range: N/A | | |

| (Parameter | Type | Size (Bytes)) |
|---|---|---|
| COMB_TYPE | String | 28 |
| Units: N/A | | |
| Range: N/A | | |
| DOWN_CONV | String | 28 |
| Units: N/A | | |
| Range: N/A | | |
| UP_CONV | String | 28 |
| Units: N/A | | |
| Range: N/A | | |
| DEMUX | String | 28 |
| Units: N/A | | |
| Range: N/A | | |
| MUX | String | 28 |
| Units: N/A | | |
| Range: N/A | | |
| RCVR_OTHER | String | 28 |
| Units: N/A | | |
| Range: N/A | | |
| XMTR_OTHER | String | 28 |
| Units: N/A | | |
| Range: N/A | | |
| COMB_OTHER | String | 28 |
| Units: N/A | | |
| Range: N/A | | |
| SPARE1 | String | 28 |
| Units: N/A | | |
| Range: N/A | | |
| SPARE2 | String | 28 |
| Units: N/A | | |
| Range: N/A | | |
| OPEN_TEXT | | |
| SPACE_USED | Short Integer | 2 |
| INFORMATION | Character | 1600 |

Site Log File

| Parameter | Type | Size (Bytes) |
|---|---|---|
| DATE | Integer | 4 |
| Units: yyyymmdd | | |
| Range: N/A | | |
| TIME | Integer | 4 |
| Units: hhmmss | | |
| Range: N/A | | |
| NUM_RCV_CHANNELS | Short Integer | 2 |
| Units: N/A | | |
| Range: 2-4,2 | | |
| NUM_XMTRS | Short Integer | 2 |
| Units: N/A | | |
| Range: 2-4,2 | | |
| FIELD_STATUS_COMMENT | Short Integer | 2 |
| Units: N/A | | |
| Range: N/A | | |

Calendar File

| Parameter | Type | Size (Bytes) |
|---|---|---|
| COLLECTION_DATE | Integer | 4 |
| Units: yyyymmdd | | |
| Range: N/A | | |
| COLLECTION_TIME | Integer | 4 |
| Units: hhmmss | | |
| Range: N/A | | |

Stat1 File

| Parameter | Type | Size (Bytes) |
|---|---|---|
| MEAN_RSL | Real [4] | 32 |
| Units: dBM | | |
| Range: -120.0..0.0 | | |
| STDDEV_RSL | Real [4] | 32 |
| Units: dB | | |
| Range: >= 0.0 | | |
| MEDIAN_RSL | Real [4] | 32 |
| Units: dBM | | |
| Range: -120.0..0.0 | | |

| (Parameter | Type | Size (Bytes)) |
|---|---|---|
| CORRELATION | Real [6] | 48 |
| Units: N/A | | |
| Range: -1.0..1.0 | | |
| FADE_RATE | Real [4] | 32 |
| Units: median crossings/second | | |
| Range: >= 0.0 | | |

Stat2 File

| Parameter | Type | Size (Bytes) |
|---|---|---|
| LEVEL1_FADE | | |
| DURATION_MEAN | Integer [4] | 16 |
| Units: seconds | | |
| Range: <= collection in seconds | | |
| DURATION_STDDEV | Integer [4] | 16 |
| Units: seconds | | |
| Range: >= 0 | | |
| RATE | Integer [4] | 16 |
| Units: threshold crossings per second | | |
| Range: >= 0 | | |
| LEVEL2_FADE | | |
| DURATION_MEAN | Integer [4] | 16 |
| Units: seconds | | |
| Range: <= collection in seconds | | |
| DURATION_STDDEV | Integer [4] | 16 |
| Units: seconds | | |
| Range: >= 0 | | |
| RATE | Integer [4] | 16 |
| Units: threshold crossings per second | | |
| Range: >= 0 | | |
| SPARE_REAL1 | Real | 8 |
| Units: N/A | | |
| Range: N/A | | |
| SPARE_REAL2 | Real | 8 |
| Units: N/A | | |
| Range: N/A | | |
| SPARE_REAL3 | Real | 8 |
| Units: N/A | | |
| Range: N/A | | |
| SPARE_REAL4 | Real | 8 |
| Units: N/A | | |
| Range: N/A | | |

Histogram Files (Histo1, Histo2, Histo3, Histo4, Histo5)

| Parameter | Type | Size (Bytes) |
|---|---|---|
| MAX_NUM_OF_SAMPLES<br>Units: count<br>Range: 1..60000,1 | Integer | 4 |
| COLLECTION_LENGTH<br>Units: seconds<br>Range: < 24 hours | Short Integer | 2 |
| HISTOBOTTOM<br>Units: dBM<br>Range: <= -40.0 | Real [4] | 32 |
| RSL_HISTOGRAM<br>[4,200]<br>Units: count<br>Range: 0..32768,1 | Short Integer<br>1600 | |
| OVERFLOW_CELL<br>Units: bin number<br>Range: 1..200,1 | Short Integer [4] | 8 |

Spare File

| Parameter | Type | Size (Bytes) |
|---|---|---|
| <to be determined> | <to be determined> | 128 |

# GLOSSARY

## Acronyms

| | |
|---|---|
| A/D | analog-to-digital |
| CU | collection unit |
| DCS | data collection system |
| DEB | digital European backbone |
| DFADE | deep fade statistics |
| ETMP | edit, transfer, and merge package |
| FHEADER | field header |
| FIB | file information block |
| FQLP | field data quick-loop package |
| LMAS | link performance data management and analysis system |
| PC | personal computer |
| RFCAL | radio calibration |
| RSL | received signal level |
| RSLDATA | received signal level statistics |
| SGAP | statistics graphic analysis package |